IBM

# Mag Card II Typewriter

## Operating Instructions



The instructional material in this book describes basic procedures for using the IBM Mag Card II Typewriter. However, the principles involved are adaptable to many different procedures.

© Copyright International Business Machines Corporation, 1973, 1974

IBM

# Mag Card II Typewriter

## Contents


Introduction

The Typewriter

Memory—Typing and Playing Back

Working with Cards

Indented Projects

Card Duplication

Revision

Two-Pass Revision Procedure

Revise and Scan

Review and Revision Refinements

Special Card Handling

Decimal Tab

Alternate Section

Typewriter Features

What Happened?

## TO THE STUDENT

You will notice this book is different from the ordinary how-to-do manual. It is a "self-teach program" written so you can teach yourself to use the IBM Mag Card II Typewriter.

With this book, you are both the teacher and the student. As the teacher, you will decide how quickly you can cover the material confidently. As the student, you will find a small amount of "telling" and a lot of "doing." Looking at the illustrations will help you learn. Once you learn something new, there will be a chance to try it on the IBM Mag Card II immediately. The success of your learning is based on your using the IBM Mag Card II as you work through the book.

Before you begin the program, gather these supplies:

- This book, including:
  - 10 prerecorded exercise cards
  - REFERENCE BOOKLET
- Pencil
- Large stack of inexpensive paper or continuous paper.
- The card tray, card folders, and project boxes.

## FOLLOW THESE GUIDELINES:

- **Read every page unless otherwise directed.** The information is presented in small, easy steps. Follow the directions carefully. Directions to do something are shown like this:

> Continue reading these guidelines.

- **Do each practice exercise.** Insert paper for each exercise and type the copy line-for-line as it appears in the book. Follow the directions exactly as they are given. Repeat an exercise only if it will help you learn.

- **Review any time you wish.** The "YOU HAVE NOW LEARNED" sheets are provided to help you do this. You should be confident of the previous material before going ahead.

- Take the REFERENCE BOOKLET from the back of this book and place it beside the typewriter. Refer to it as needed if any of the lights on the left side of the keyboard come on as you are using the typewriter.

- **If you have a question:**
  - Use this book as a reference. (The Index is on page 293.)
  - Use the What Happened? section (page 283).
  - If you don't find the answer, call your IBM Representative.

## PREFACE

Your IBM Mag Card II Typewriter has been designed to make the job of typing much simpler. A unique combination of typing technologies makes this possible.

First, there's the electronic keyboard that's easy to learn, easy to use and far more efficient than an ordinary keyboard. IBM has incorporated all of the improvements and innovations that make typing easier. Now even your draft copy can be more easily read. The IBM Mag Card II Typewriter features a correctable Film Ribbon that automatically lifts typing errors off the page, eliminating strikeovers.

Next is the magnetic card; the reusable medium that provides convenient document storage and compatibility with all other IBM Mag Card Typewriters.

But the major difference is the addition of an electronic "memory" that does much of the work you'd normally do. You can't see the memory, but it's there to remember and react to everything you type . . . even instructions. You can type into memory, record out of memory, read into memory, revise in memory, and play back from memory.

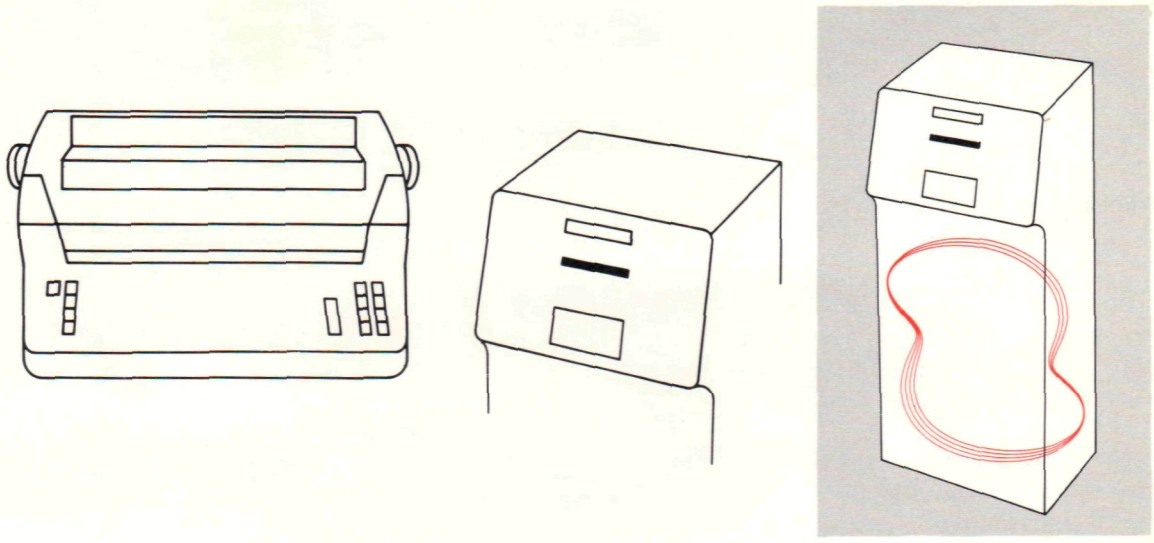
All the convenience you could ask for has been engineered into the IBM Mag Card II Typewriter. You're sure to find that it not only takes the tedium out of typing, but also increases your efficiency and typing output.

# Introduction



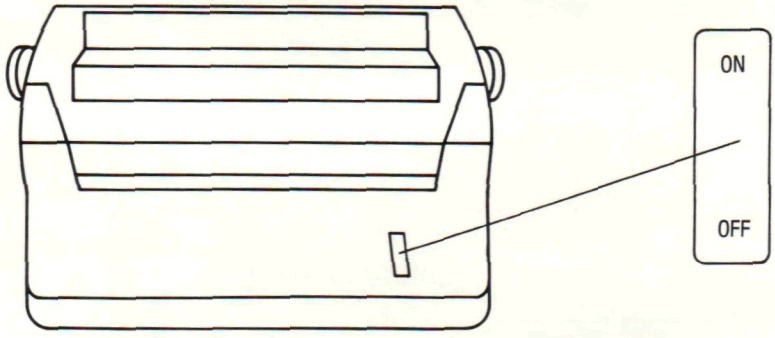
The IBM Mag Card II Typewriter has three parts:

- Typewriter
- Card Unit
- Memory



---

The on/off control on the typewriter supplies power to all three parts.




Turn the machine on. If it is already on, turn it off, then on again.

## EXERCISE NO. 1

To become familiar with typing on the IBM Mag Card II, type the paragraph below.

Follow these steps:

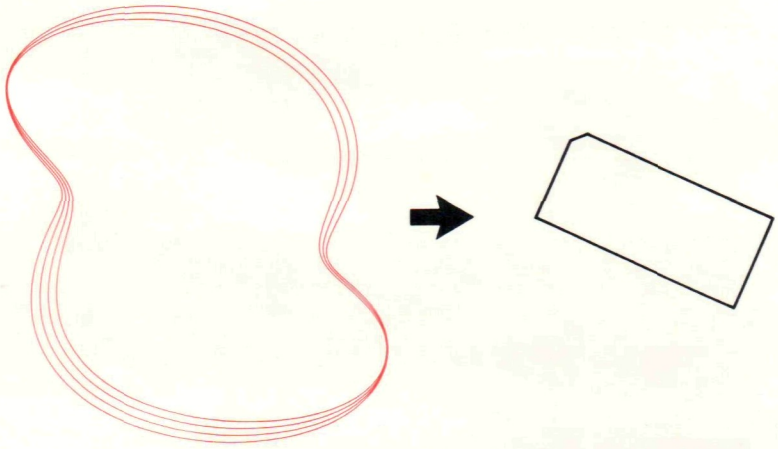
1. Insert paper.*
2. Check the buttons on the left side of the keyboard to see that they are all up. If any are down, release them.
3. Type the paragraph line-for-line, exactly as shown.
4. Ignore any errors you make; you will soon learn how to correct them.
5. End the exercise with two carrier returns (2 CR).
6. DO NOT TURN THE TYPEWRITER OFF WHEN YOU FINISH TYPING. The paragraph is stored in the memory; turning the typewriter off clears the memory.

**PRACTICE COPY:**

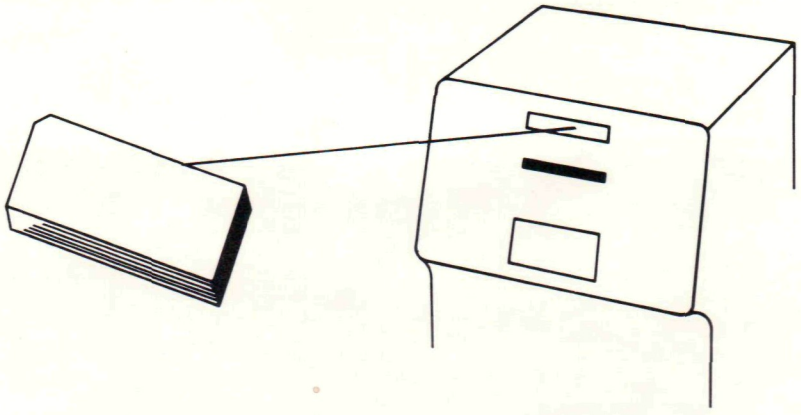
More than half a million years ago, as man was becoming man, he used his first tool, language. He also made actual tools for hunting from the beginning. Human societies date from the earliest times, too.2CR

*For assistance in inserting paper, see page 8.

The text in memory is saved by recording it on magnetic cards.



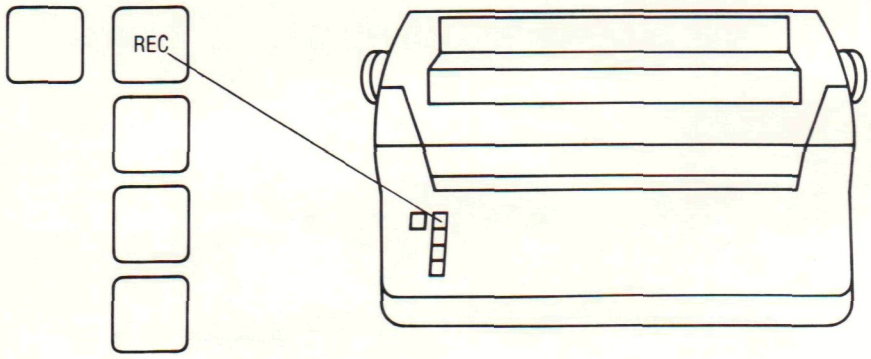
The magnetic cards are placed in the Pack Feed Slot of the Card Unit. The Pack Feed Slot provides automatic feeding of cards into the Card Unit.



Follow these steps to load the Pack Feed Slot:

1. Hold a stack of cards (up to 50) by the numbered end with the numbers facing up.
2. Tap the unnumbered end of the stack on a flat surface.
3. Push the cards into the Pack Feed Slot as far as you can. About one-third of the card will extend out of the slot.

When the REC (Record) Button is depressed:

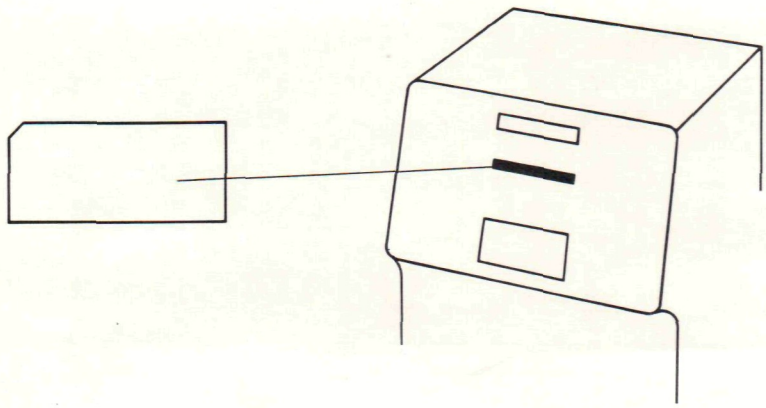



- A card is fed automatically.
- The text in memory is recorded on the card and automatically cleared from the memory.
- The recorded card is dropped into the Stacker.

Depress REC.* Leave the recorded card in the Stacker.

---

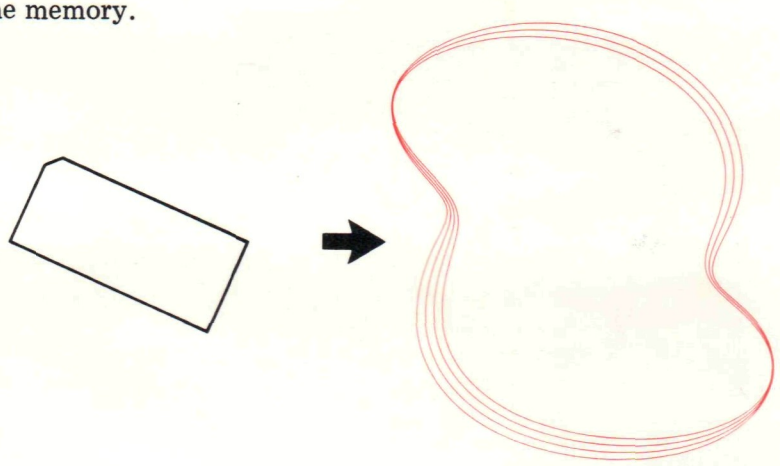
To play back, the text must be put back into memory. To do this, the card is inserted in the Single Card Slot of the Card Unit.



*If nothing happens when REC is depressed, it could be because:

1. The TPWR Button is locked down. When you type with the TPWR Button down, nothing goes into memory; therefore, there is nothing to be recorded on a card.
2. The card did not feed correctly. Remove the cards from the Pack Feed Slot. Tap the unnumbered end on a flat surface, and replace in the Pack Feed Slot. Depress REC again.

The machine "reads" the information recorded on the card and stores it in the memory.



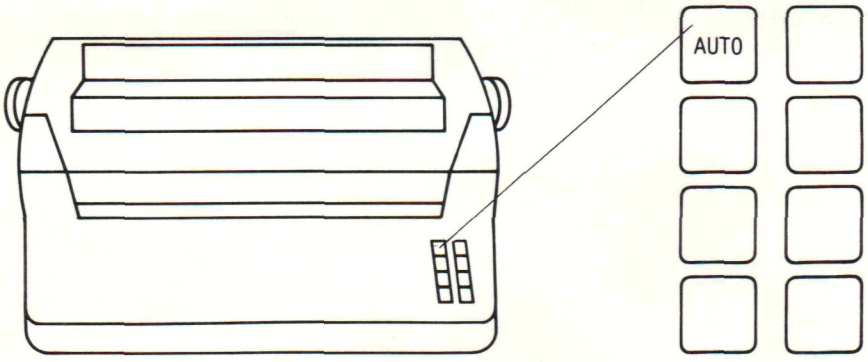
When reading is complete, the card ejects through the Single Card Slot. The card has not been changed in any way.

Follow these steps to read the paragraph you just typed and recorded back into memory:

1. Take the recorded card from the Stacker and insert it in the Single Card Slot. The machine will draw it in quickly.
2. You will hear a clicking sound as the card is being read.
3. When the card comes out, remove it and place it in the plastic card tray on top of the unit. You do not need to save the typing on this card.

---

The AUTO Button is used to start playback. Playback will stop automatically when the end of the text in memory is reached.

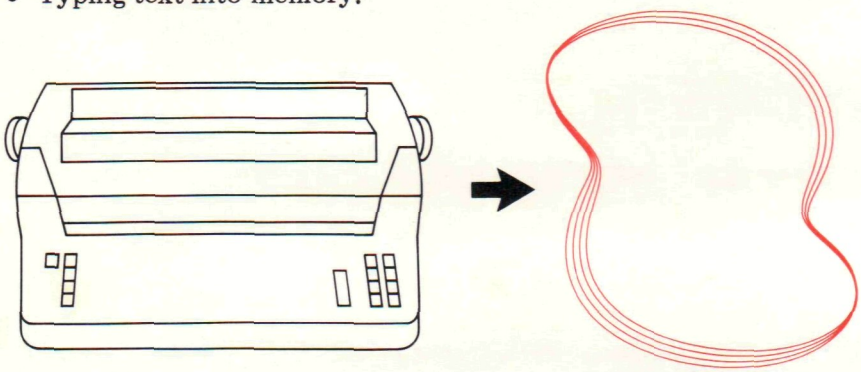



To play back:

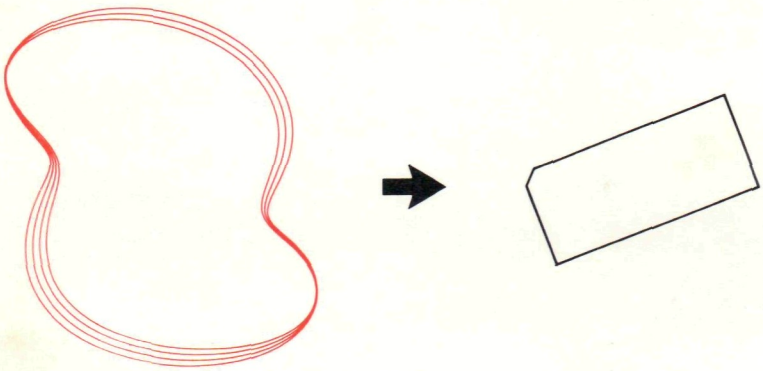
1. Depress AUTO. If playback stops before the paragraph is completed, depress AUTO again.
2. Turn the machine off.
3. Remove the cards from the Pack Feed Slot and place them in the card tray.

**You have just experienced:**

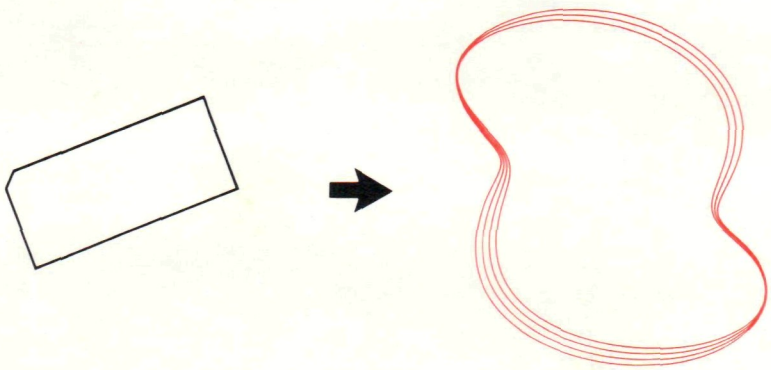
- Typing text into memory.



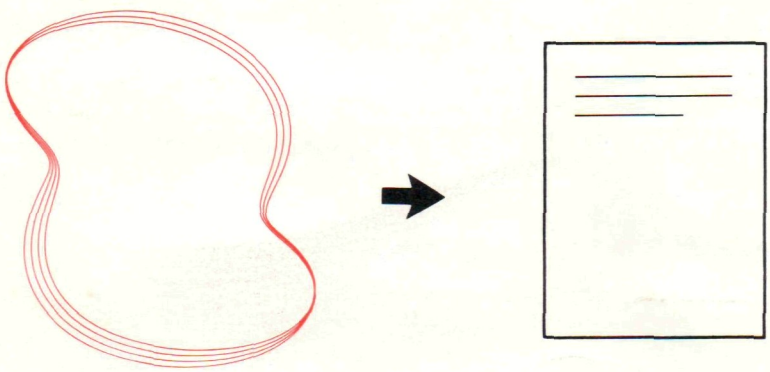
- Saving the text in memory by recording it on a magnetic card.



- Reading the card to put text back into memory.



- Playing back the text stored in memory.



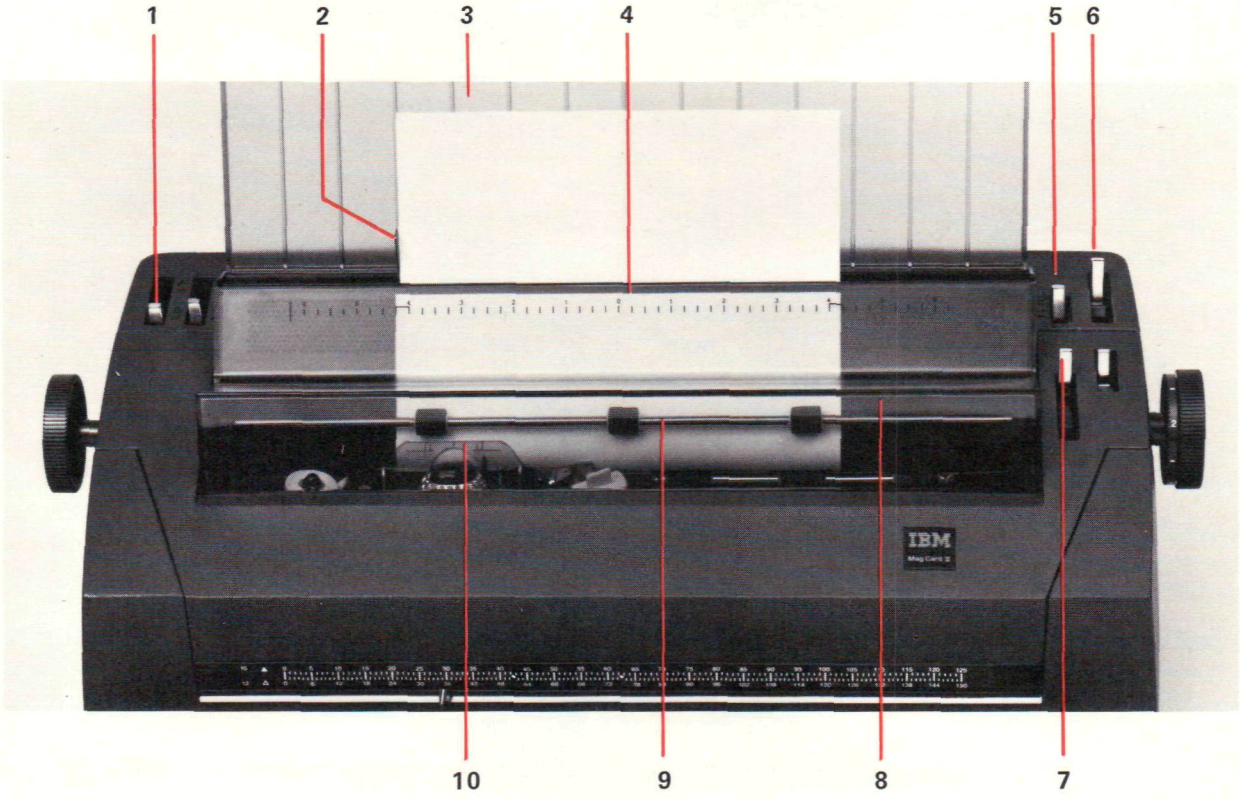
# The Typewriter





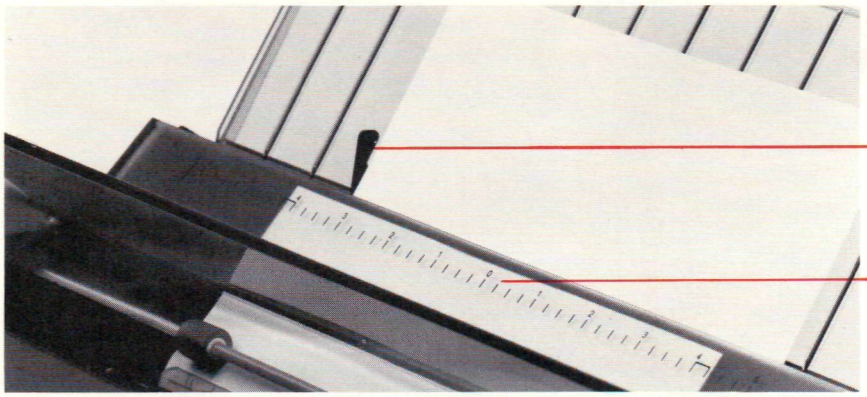
Before you go any further, you need to become familiar with the IBM Mag Card II Typewriter.

The illustration below shows the location of the features you will use as you advance through this book. Other features of the IBM Mag Card II are explained in the Typewriter Features Section on page 269.




1. Dual Pitch Lever
2. Paper Guide
3. Paper Support
4. Paper Centering Scale
5. Line Space Lever
6. Paper Release Lever
7. Paper Bail Release Lever
8. Acoustical Filter Hood
9. Paper Bail
10. Cardholder

To insert and align paper accurately, move the paper guide to the desired location on the paper centering scale.




For this training, set the paper guide at 0.

Follow these steps to insert paper in the typewriter:

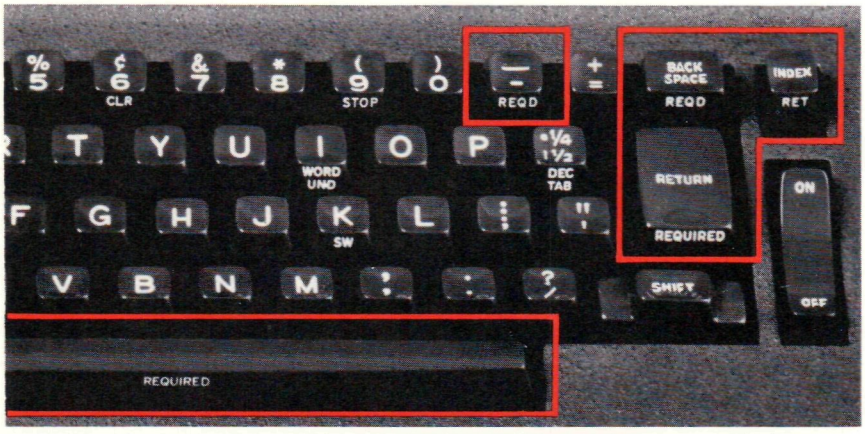
1. Pull the paper release lever forward. (The paper bail will also come forward.)
2. Place the paper against the paper support and drop it into the machine.
3. Push the paper release lever back. (The paper bail will still be in the forward position.)
4. Roll the paper into the machine until it is approximately one-half inch above the cardholder.
5. Push the paper bail lever back. The paper should be caught under the paper bail roller.
6. Position your paper for the first line of typing.

To remove paper:

1. Pull the paper release lever forward.
2. Remove the paper.

---

The IBM Mag Card II has five typamatic keys.



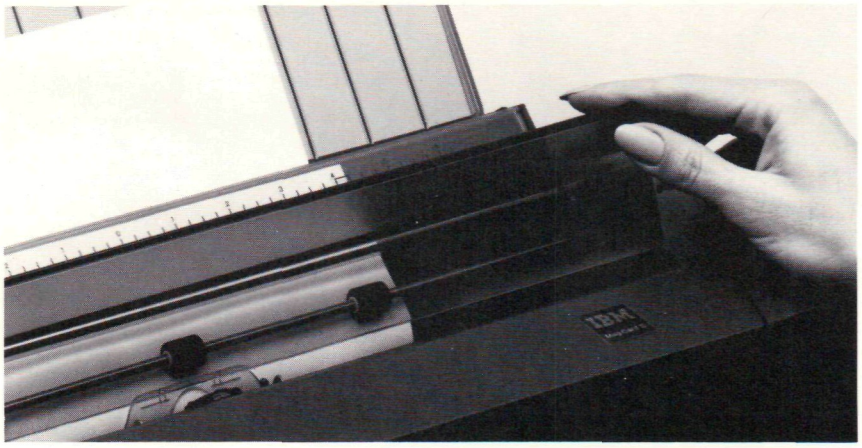

Typamatic keys are those having a repeat action when held down. Any of the five keys can be depressed once for single action or held down for repeat action. The typamatic keys save typing time and effort.

The Acoustical Filter Hood should be in the closed position when the IBM Mag Card II is being used.

**WARNING: Keep hair, fingers, and personal objects (such as bracelets, necklaces, neckties, etc.) out of the printing and ribbon area when the machine is on.**

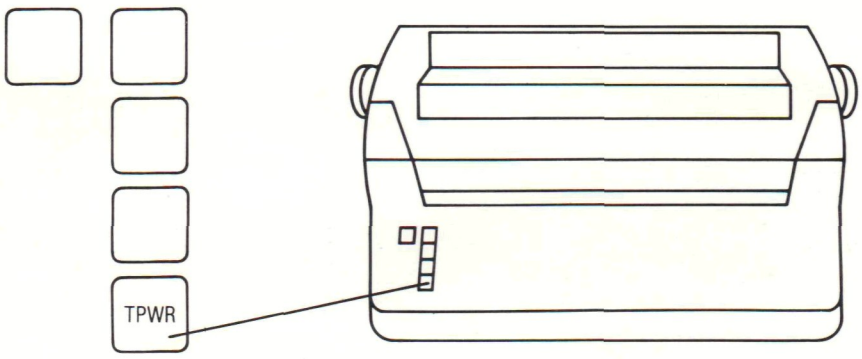
**In order to prevent long hair, fingers, and personal articles from getting caught on the rotating shaft in the machine, you should comply with this warning and insure that other persons do also.**

**If the typing unit has a plastic accordian-like shield over the shaft, it should not be removed.**



---

The TPWR (Typewriter) Button on the left of the keyboard has two positions—up and down.




TPWR is locked down when you make typewriter adjustments. In this position nothing you type goes into memory; for example, the carrier returns and spaces you use to position the margin do not go into memory.

Turn the machine on. Depress TPWR to lock it down.

The IBM Mag Card II is a dual pitch typewriter. This means you can choose either pica (10 characters per inch) or elite (12 characters per inch) spacing.

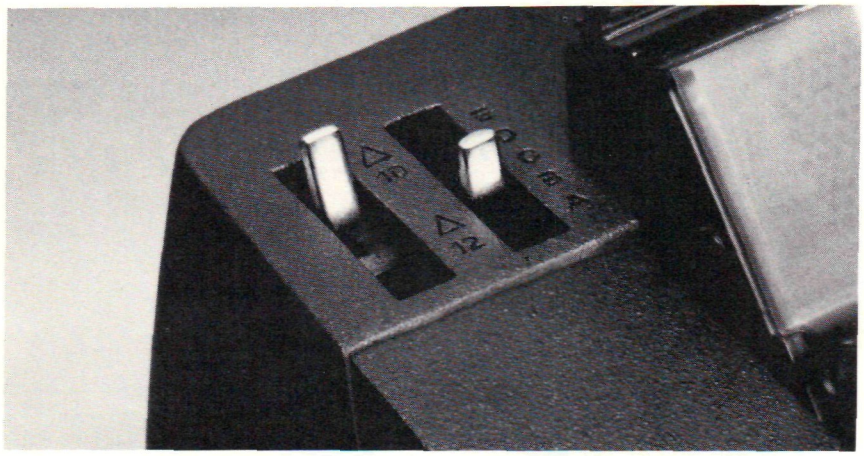
**PICA:** The rapid pace of business today demands production from all office systems.

**ELITE:** The rapid pace of business today demands production from all office systems.

For this training you will be working in elite spacing.

---

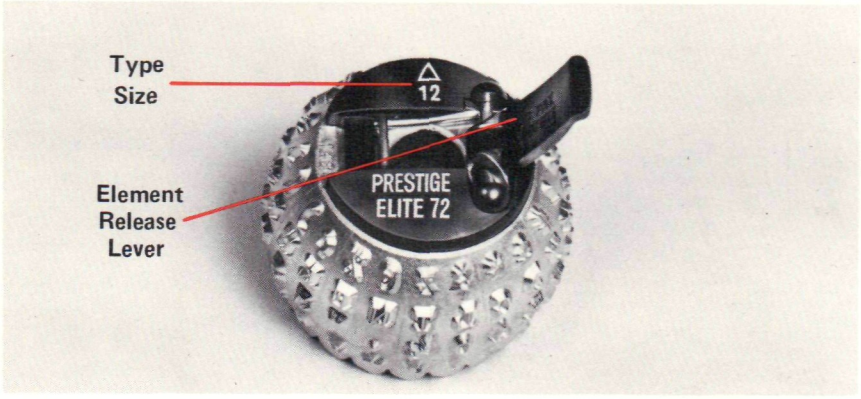
The dual pitch lever sets the typewriter spacing. If you change spacing, the carrier must be at the left margin.




Check to see where the dual pitch lever is positioned. If it is not at 12, return the carrier, and move the dual pitch lever to 12.

The element on your typewriter can be changed in seconds.

Type size is indicated by the number printed above the element release lever. Generally, the number on the element should match the pitch selected.






Check to see if you have a 12-pitch element on the typewriter. If not, put a 12-pitch element on. If you do not know how to change an element, follow the steps below.

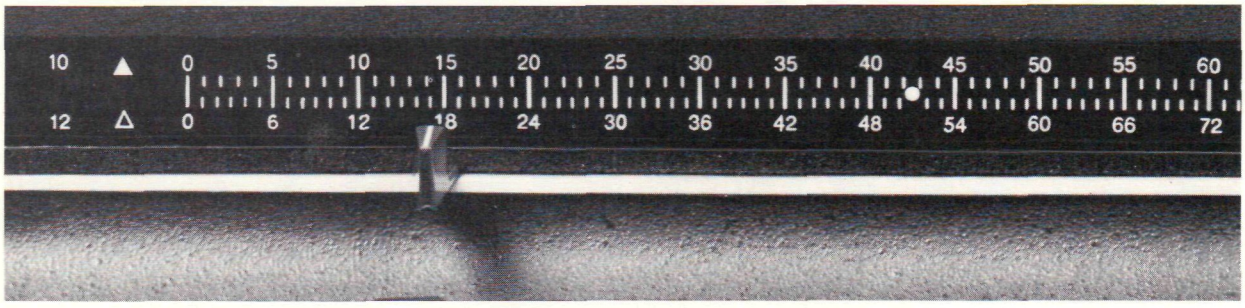
To remove an element:

1. Fold back the Acoustical Filter Hood.
2. Tap the shift key. (This assures that the typewriter is in lowercase.)
3. Lift the element release lever to the open position—until you hear the click.
4. Using the lever, raise the element straight up off the element post.

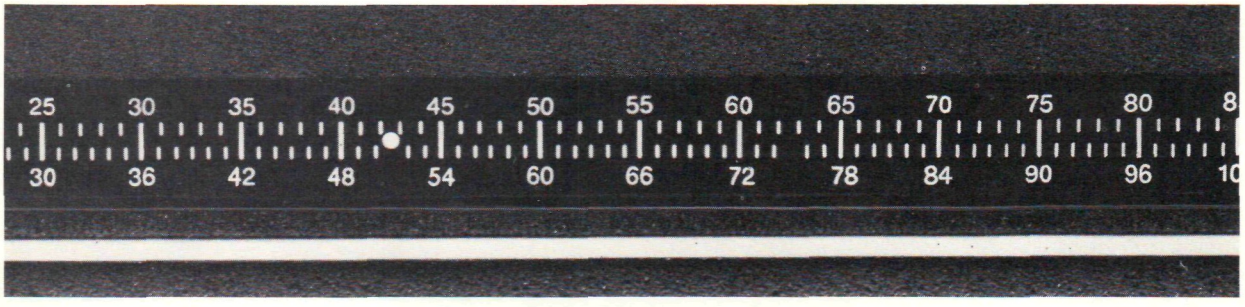
To replace an element:

1. Tap the shift key.
2. Using the element release lever, place the element on the element post with the triangle pointing to the platen.
3. Once the element is in position, close the lever. Avoid using force.
4. Close the Acoustical Filter Hood.

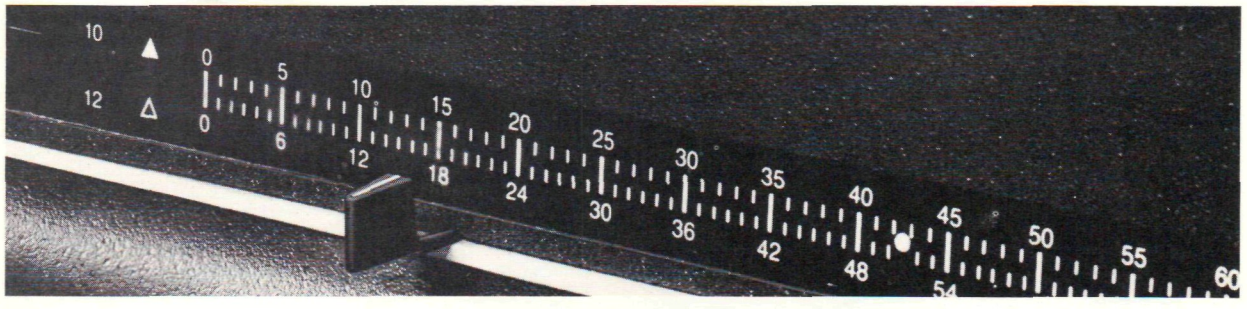
The IBM Mag Card II has two margin scales—one for pica spacing (10), and one for elite spacing (12). Both scales are numbered at half-inch increments.




There are two centering dots on the 12-pitch margin scale—one at 50 and one at 78. For this training, your copy guide is set at 0. Therefore, the dot at 50 is the center of the paper.*




The left margin stop can be set only on the half-inch marks.

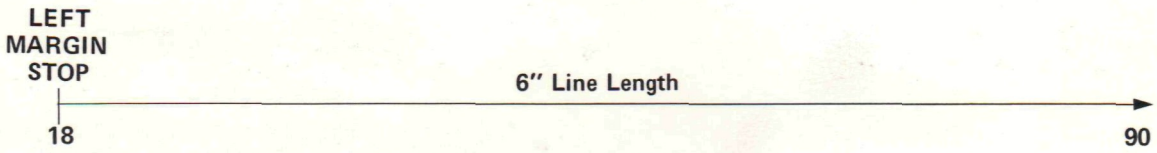



Move the left margin stop slightly to the right of 18 on the 12 scale. Carrier return to check the margin. If it is not at 18, reset it.

*Use the other centering dot when the paper is centered in the typewriter.

There is no right margin stop. When the machine is turned on, the line length is set automatically.

The line length is set at six inches (60 characters pica; 72 characters elite) from the left margin.

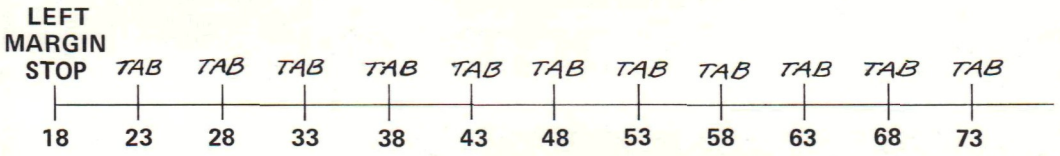



The bell rings eight characters from the end of the line.

> Space across until you hear the bell; then space eight times—this is the end of the line. Return the carrier.

---

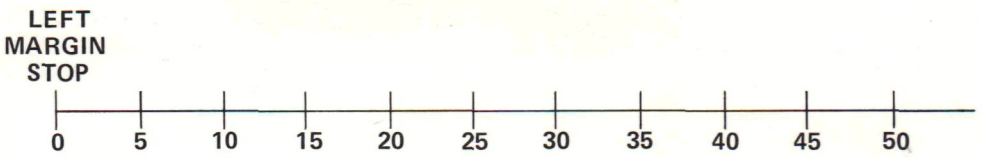
In addition, when the machine is turned on, tabs are set every five spaces. These tabs set an equal distance apart form a "tab grid."




> Tab across to see that tabs are set. Return the carrier to the left margin.

---

Moving the left margin stop does not change the line length or the distance between tab stops.* They "move" with the left margin.




> Move the left margin stop to 0. Return the carrier; then tab across to see that tabs are still set every five spaces. Change the left margin stop back to 18 and return the carrier.

*Instructions for changing the line length and tab stops are given in a later section.

## YOU HAVE NOW LEARNED:

- The typewriter has five typamatic keys.
- The TPWR (Typewriter) Button is locked down when you make typewriter adjustments.
- The IBM Mag Card II is a dual pitch typewriter.
- The dual pitch lever sets the typewriter spacing:

  10 = pica spacing
  12 = elite spacing

- The carrier must be at the left margin to change from 10- to 12-pitch or vice versa.
- The IBM Mag Card II has two margin scales numbered at half-inch increments.
- The left margin stop can be set only on the half-inch marks.
- Because the line length and tabs are set automatically (six-inch line; tabs every five spaces) the typewriter is ready for typing when it is turned on.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

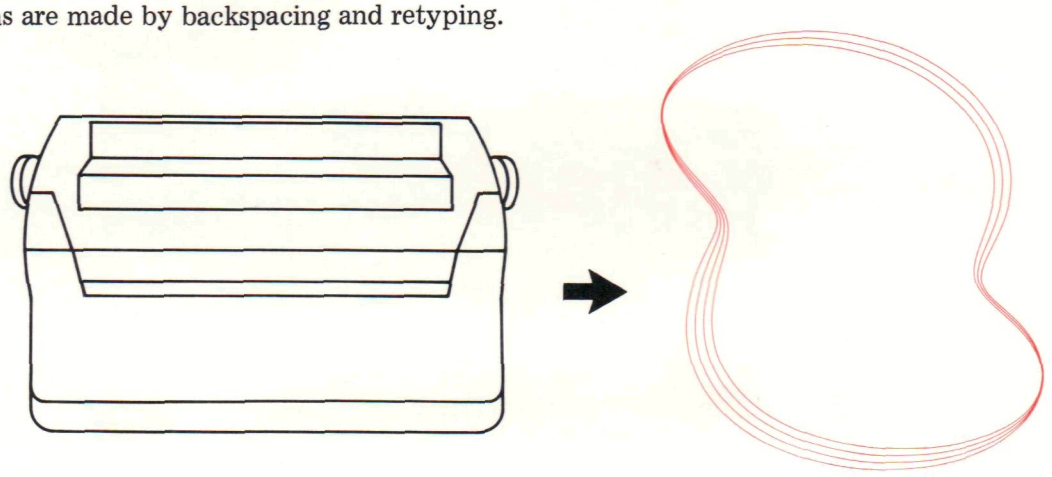
# Memory –
# Typing and Playing Back


Typing into Memory
Special Instructions
Clearing Memory
Playback from Memory
Error Correction
Required Hyphens
Required Space
Required Carrier Return
Word Underscore
Required Backspace
Centering
Tables and Columnar Projects
Tables with Text
Stop Instruction
Repetitive Letters

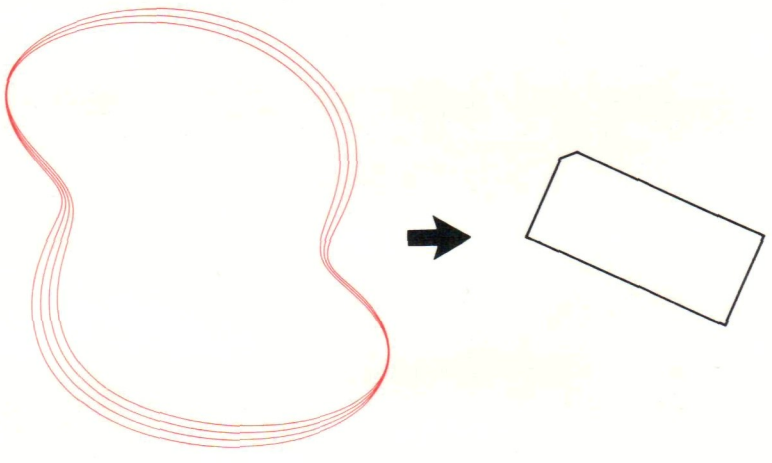



Before you go any further, let's take a quick look at what you will be learning as you advance through the book and how the three parts of the IBM Mag Card II come together.

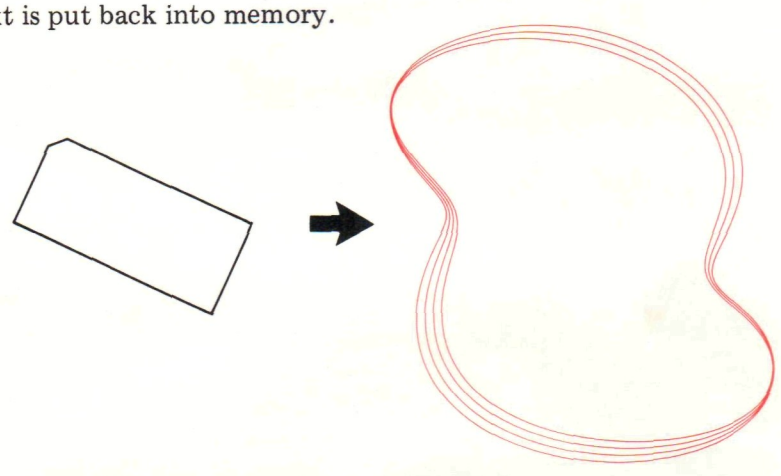
Typing into memory lets you type without concern for errors. Corrections are made by backspacing and retyping.



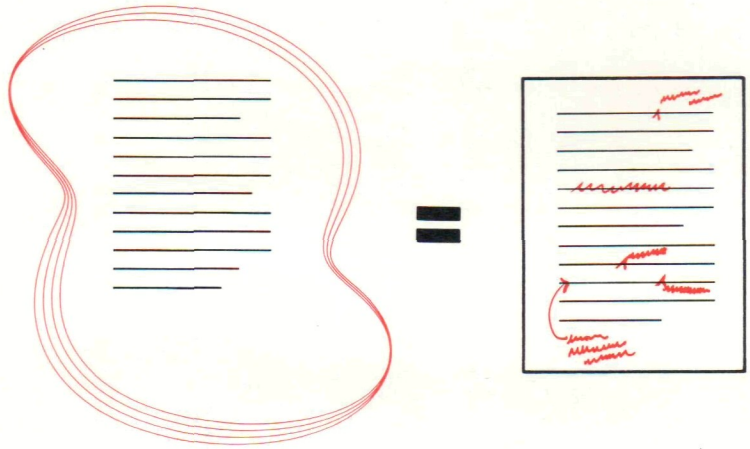
Everything you type into memory can be saved by recording it on a magnetic card.



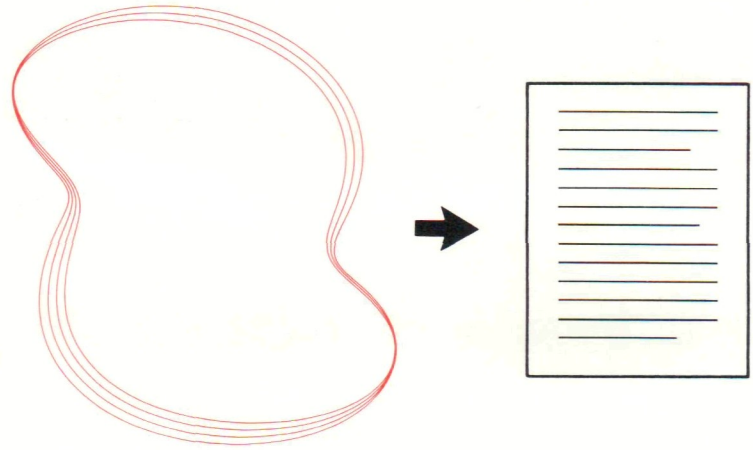
If the document comes back, the card is read by the typewriter, and the text is put back into memory.



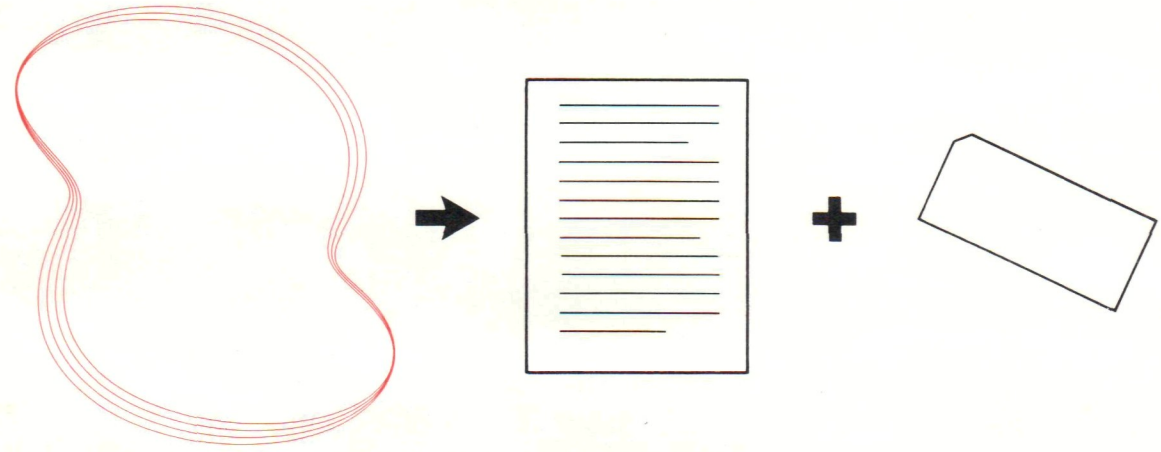
Text in memory can be revised and updated to reflect author's changes.



Once changes have been made, the text is played back to produce a new updated typewritten copy.

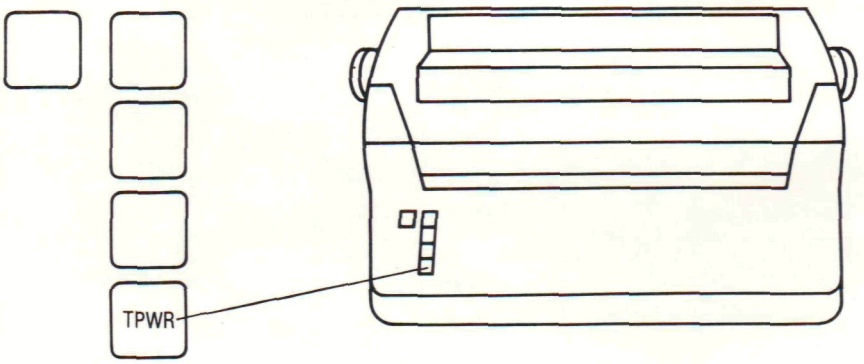


A new card is also recorded—a card which exactly matches the play-back copy.



## TYPING INTO MEMORY

As you learned earlier the TPWR Button has two positions—up and down. To type into memory, the TPWR Button must be up.

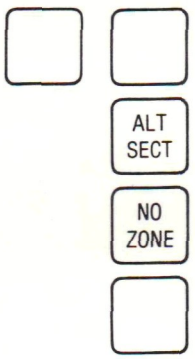



Remember, when TPWR is locked down, nothing you type goes into memory.

> Release the TPWR Button if it is down.

---

Two other buttons, ALT SECT and NO ZONE, also have two positions. These buttons will be explained when you need to use them; however, for now, they must be up.




> Release ALT SECT and NO ZONE if they are down.

As you type into memory, errors you catch immediately can be corrected by backspacing to the error and retyping from that point.

Backspacing deletes the text from memory. It also activates the white tape which removes the backspaced characters from the paper.*

Tht + BACK SPACE = Th

Now, relax and type the next exercise.

---

## EXERCISE NO. 2

Use the paragraph below to practice backspacing to correct immediate errors.

Follow these steps:

1. Type the exercise line for line, including the deliberate errors which are circled.
2. When you reach the check mark (✓):
   - Backspace to delete the error.
   - Retype from that point.
3. Backspace/retype to correct your own errors. Disregard any errors you find after you have returned the carrier. You will soon learn how to correct these errors.
4. End the exercise with two carrier returns.
5. DO NOT TURN THE TYPEWRITER OFF. You will use this exercise again soon.

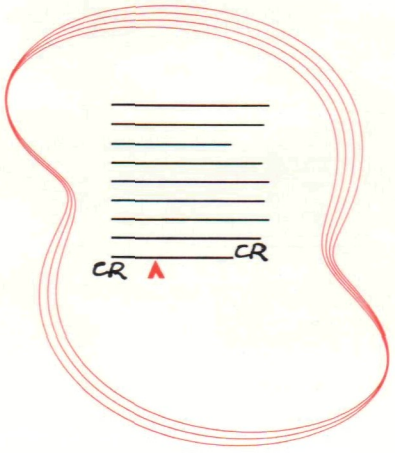
### PRACTICE COPY:

It is the human siklls ✓ epitomized in our resources of labor which are the country's greatestassets ✓. Most Americans believe that work is not only worth doing but ✓ that it is worth doing well. For that reason they believe tha education is to be sought and used by every citizen to improve his standard of living. 2 CR

*Some typewriters are equipped with a white tape which covers up the backspaced characters rather than removing them.

The exercise is now stored in memory exactly as you typed it.

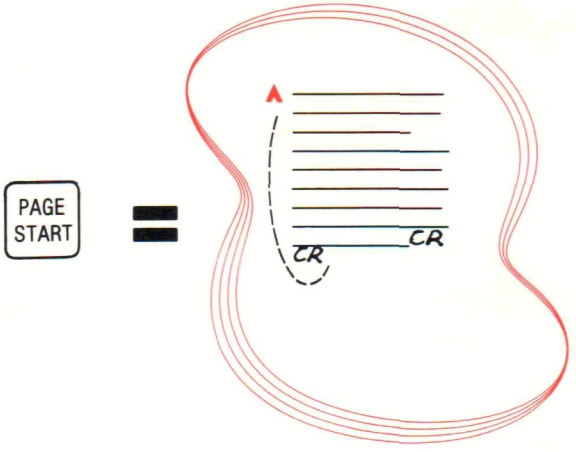
To understand where you are in memory, think of the memory as having a "pointer" which is pushed along as you type. When you stop typing, the pointer is at the end of the text.




---

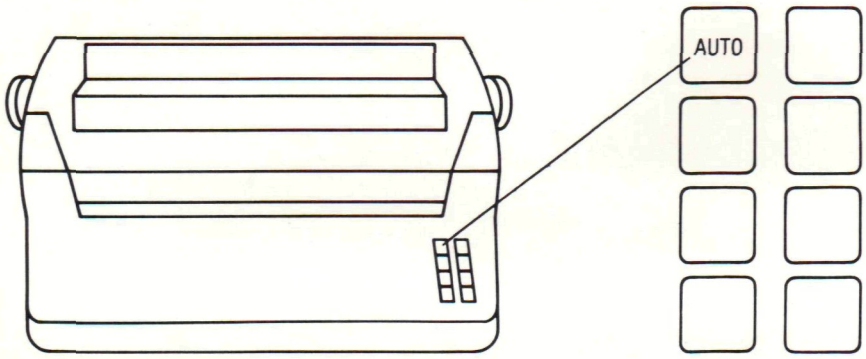
To play back the text in memory, you must first move the pointer back to the beginning of the text.

The PAGE START Button does this.




Find the PAGE START Button on the right side of the keyboard and depress it. You will hear and see the carrier move when PAGE START is depressed. This lets you know that the pointer has been repositioned. Depress PAGE START again. This time nothing will happen because the pointer is already at the beginning of the page.

Playback starts when you depress AUTO.



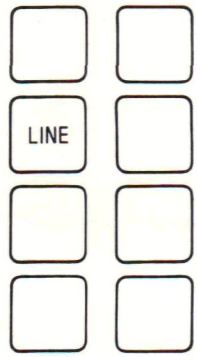

Depress AUTO. Playback will stop when the end of text is reached.

**NOTE:**
If nothing happens when AUTO is depressed, depress PAGE START then AUTO again. If you still get no action, the memory is empty. The reason could be:

1. The TPWR Button was down when you typed the exercise. (TPWR must be up to type into memory.) To complete this exercise:
   - Release TPWR.
   - Retype the exercise.
2. The typewriter was turned off after typing the exercise. (Turning the typewriter off clears the memory.) To complete this exercise:
   - Retype the material.

---

You can also play back a line at a time.

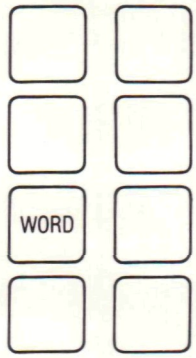



= **STOP AFTER A CARRIER RETURN**

Practice playing back by LINE:

1. Depress PAGE START.
2. Depress LINE. Playback will stop after the carrier return.
3. Continue to play back the exercise one line at a time.

The WORD Button lets you play back one word at a time.




= STOP AFTER A SPACE, A TAB, OR A CARRIER RETURN.

---

A space or carrier return is a part of the word it follows:

The SP | Word SP | Button SP | is CR

---

A tab is also a part of the word it follows.

1234 TAB | 5678 TAB | 9753 CR

---

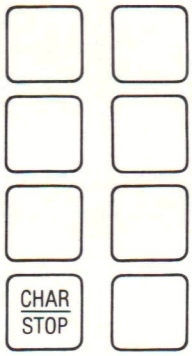
A space, tab, or carrier return by itself is also considered a word.

TAB | It | is | the | human | skills | epitomized | in | our | resources | of | labor | which CR
are | the | country's | greatest | assets. SP SP | Most | Americans | believe | that | work | is CR
not | only | worth | doing | but | that | it | is | worth | doing | well. SP SP CR

Practice playing back by WORD:

1. Depress PAGE START.
2. Play back the first line, one word at a time.

The CHAR/STOP Button lets you play back one character at a time.

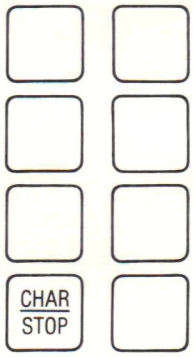



= ONE CHARACTER

Play back the next word one character at a time.

---

To stop AUTO, LINE, or WORD playback instantly, depress CHAR/STOP.




= STOP

Practice using CHAR/STOP to stop playback instantly:

1. Depress PAGE START.
2. Depress AUTO. As the text plays back, depress CHAR/STOP.
3. Depress LINE; use CHAR/STOP to stop playback in the middle of the line.
4. Continue to use AUTO and CHAR/STOP to start and stop playback.

When you have completed this exercise, TURN THE TYPEWRITER OFF.

YOU HAVE NOW LEARNED:

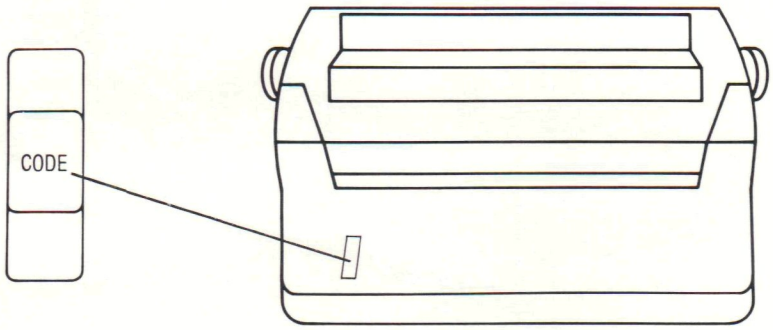
- The TPWR Button must be up to type into memory.
- Immediate errors may be corrected by backspacing and retyping.
- The PAGE START Button locates the beginning of the text in memory.
- When you play back by depressing AUTO, playback stops automatically at the end of text.
- When you play back by LINE, playback stops after a carrier return.
- When you play back by WORD, playback stops after a space, tab, or carrier return.
- A space, tab, or carrier return by itself is considered a word.
- The CHAR/STOP Button stops playback instantly.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## SPECIAL INSTRUCTIONS

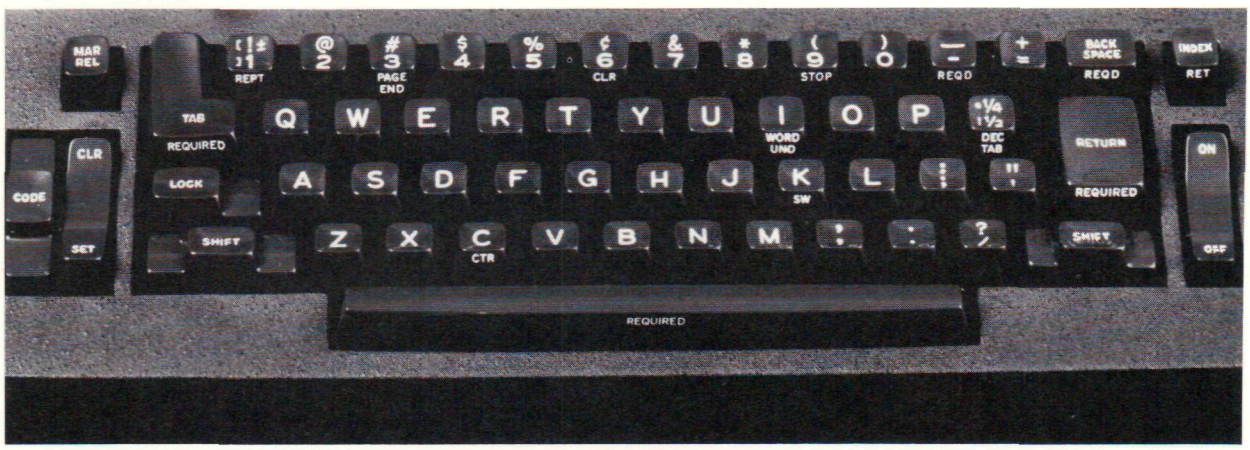
Typing on the IBM Mag Card II is just like typing on any other typewriter. However, because the IBM Mag Card II has a memory, there are some special instructions which you must learn to type. These special instructions are covered in this section.

The CODE Button is held down while you type certain keys to put special instructions in the memory or to initiate certain actions.



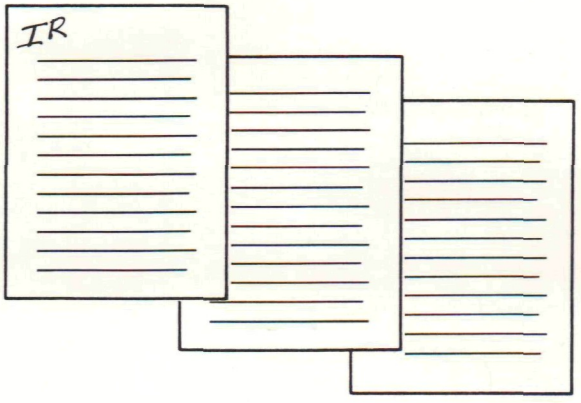

---

The keys and buttons used to type special instructions are labeled on the front. These labels tell you the instruction given when used with the CODE Button.



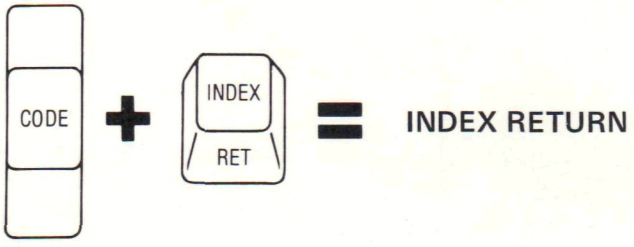
The first special instruction you will learn is the Index Return (IR).

The Index Return is typed at the beginning of each new project to assure that all playback will start at the left margin.




---

An Index Return (IR) is typed by holding the CODE Button and typing an index.

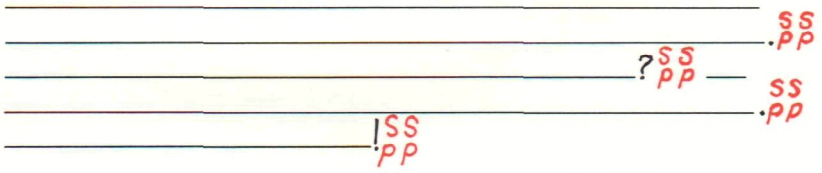



An index causes the paper to space vertically from any point on the writing line to the next line without returning the carrier. Coding the index causes the carrier to return.

---

Before typing the next exercise, there is one typing procedure you must learn that does not require a special instruction.

- Space twice after all ending punctuation including that at the end of a line, or the end of a paragraph.




Now relax and type the next exercise.

*An explanation of why an Index Return is used is found in IBM Mag Card II Logic (pages 266-267).

## EXERCISE NO. 3

Use the paragraph below to practice typing into memory.

Follow these steps:

1. Insert paper and set the typewriter for single line spacing.
2. Turn the typewriter on.
3. Type an Index Return (code index). (Remember, the index is a typamatic key. Tap the key for a single Index Return.)
4. Type the exercise line-for-line, exactly as shown. Remember to:
   - Space twice after a period—periods have been circled to help you remember.
   - Backspace to correct immediate errors; retype from the error. Once you have returned the carrier, ignore any errors you did not catch.
5. End the paragraph with two carrier returns.

### PRACTICE COPY:

IR It is obvious that the industries which our inventors and their patents bring about are mainly responsible for the creation of jobs. Tens of millions of American workers can trace their jobs to inventions. Almost no jobs can be found that are not due, in some measure, to the patented inventions put to use in industry. 2CR

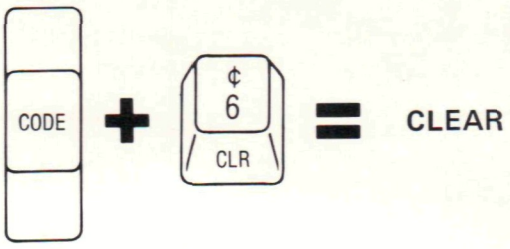
To play back:

1. Depress PAGE START; then depress AUTO.
2. DO NOT turn the typewriter off.

## CLEARING THE MEMORY

You already know that recording a card or turning off the typewriter clears the memory. You can also clear memory by typing a Clear Instruction.

The Clear Instruction is typed by holding the CODE Button and typing a "6".




Type a Clear Instruction (code "6"). To see that the memory is empty, depress PAGE START and then AUTO. Nothing will happen because the memory is clear.

---

## PLAYBACK FROM MEMORY

During playback, the typewriter determines line endings. Therefore, lines may not end exactly as you typed them.

**TYPED COPY:**

The incomes resulting from these many jobs combine to form mass markets. Mass markets make possible mass production. Mass production results in lower prices, and these lower prices, in turn, invite mass consumption, with a continually rising standard of living.

**PLAYBACK COPY:**

The incomes resulting from these many jobs combine to form mass markets. Mass markets make possible mass production. Mass production results in lower prices, and these lower prices, in turn, invite mass consumption, with a continually rising standard of living.

## EXERCISE NO. 4

Use the paragraph below to practice typing into memory.

Follow these steps:

1. Insert a clean sheet of paper.
2. Type the paragraph below line-for-line exactly as it appears.
3. Remember to:
   - Begin with an Index Return (IR).
   - Space twice after all ending punctuation.
   - Backspace and retype to correct immediate errors.
   - End with two carrier returns.

DO NOT PLAY BACK THE EXERCISE YET, OR CLEAR THE MEMORY.

**PRACTICE COPY:**

IR
Within the past century the United States has developed sources of physical power which have revolutionized American industry and indeed the world itself.

For centuries the only source of physical power which had been used by man were his muscles, those of his animals, and the winds, tides, and waterfalls when and where they were available. 2 CR

---

During playback, the last six spaces of the line length in the typewriter are the Line End Zone.

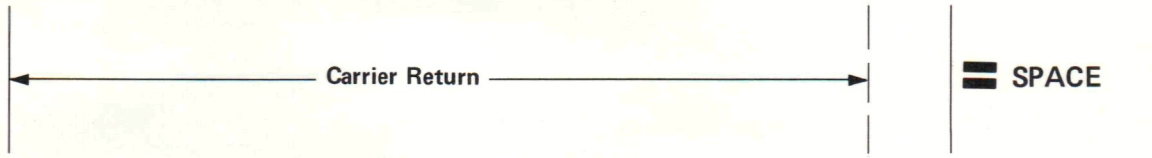



---

The typewriter ends a line automatically at the last space, hyphen, or carrier return that falls in the zone.



A single carrier return which is not used to end the line is changed to a space.




When the line ends at a space, the typewriter carrier returns to the left margin and a carrier return is entered in memory.




Depress PAGE START. Depress LINE; the Index Return will play back. Depress LINE again to play back the first line. Notice that the typewriter changes the carrier return you typed to a space and ends the line after a space.

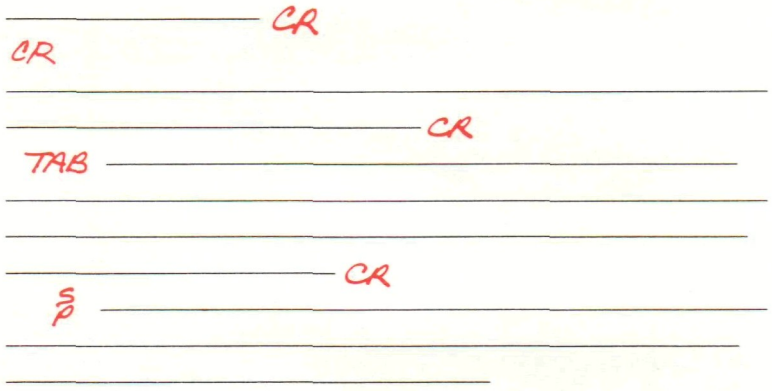
A syllable hyphen (a hyphen used to divide a word at the end of a line) which does not end the line during playback, is deleted from memory and will not print.




Depress LINE. Notice that the typewriter does not type the syllable hyphen.

Some actions that cause a line to end before the Line End Zone include:

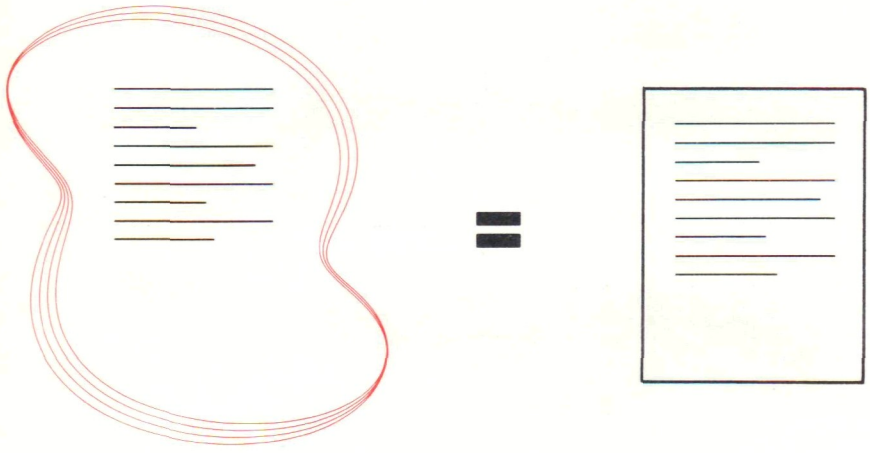
- More than one carrier return.
- A carrier return followed by a tab.
- A carrier return followed by a space.




Depress AUTO to play back the rest of the exercise. Notice that the line ends before the zone when two carrier returns separate paragraphs.

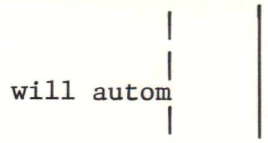
---

After playback, the text in memory is arranged exactly like the playback copy.



Clear memory.

If no space or carrier return falls in the zone, playback stops at the beginning of the zone. This stop allows you to make the line-ending decision.

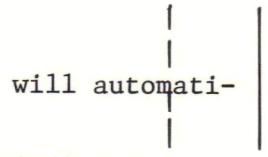



When the stop occurs in the middle of a word, you decide either to:

- hyphenate the word, or
- play the entire word out at the end of the line.

---

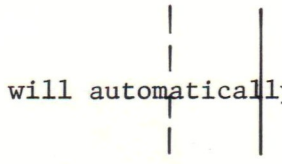
To hyphenate the word:




1. Play by CHAR to the end of a syllable.
2. Type a hyphen.
3. Depress AUTO to continue playback.

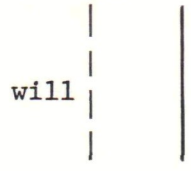
---

To let the word finish playing out on that line, depress AUTO.




---

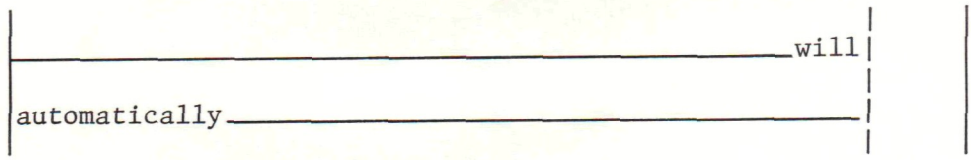
Occasionally the stop occurs immediately after a space—before any of the next word is printed.




When this happens, play out a few characters or look at the original copy to identify the word; then make the line-ending decision.

Since none of the word has printed, you may also choose to end the line where playback stopped.

To do this, carrier return; then depress AUTO. The word will print at the beginning of the next line.




## EXERCISE NO. 5

Use the paragraph below to practice hyphenating during playback.

Follow these steps:

1. Insert a clean sheet of paper.
2. Type the exercise line-for-line, exactly as shown. Remember to:
   - Begin with an Index Return.
   - Backspace and retype to correct immediate errors.
   - Space twice after ending punctuation.
   - End with two carrier returns.

**PRACTICE COPY:**

IR
There are a few times when extremely long words, such as anemometry, hyperpituitarism, hyposoristical, hypocoristically, immeasurableness, gamesmanship, iconoclastic, inadmissibility, hydrometallurgy, nonprofessional, sesquipedalian, or philosophical will begin before and not be completed within the Line End Zone. 2CR

To play back:

1. Depress PAGE START; then depress AUTO.
2. When playback stops for a hyphenation decision:
   - play by CHAR to the end of a syllable;
   - type the hyphen;
   - depress AUTO.
3. Clear memory.

## YOU HAVE NOW LEARNED:

- Line endings change during playback.
- The last six spaces of the line length in the typewriter are the Line End Zone.
- The typewriter ends the line at the last space, hyphen, or carrier return that falls in the Line End Zone.
- Playback stops for a hyphenation decision if no space, hyphen, or carrier return falls in the zone.
- To hyphenate a word at the end of a line:
  - Play by CHAR to the end of a syllable.
  - Type a hyphen.
  - Depress AUTO.
- To complete the word on the same line:
  - Depress AUTO.
- When playback stops after a space, type a carrier return to put the complete word on the next line.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## ERROR CORRECTION

You have already learned that an error in the line you are typing may be corrected by backspacing and retyping.

Sometimes you may not notice an error until you are typing the next line such as in the illustration below:

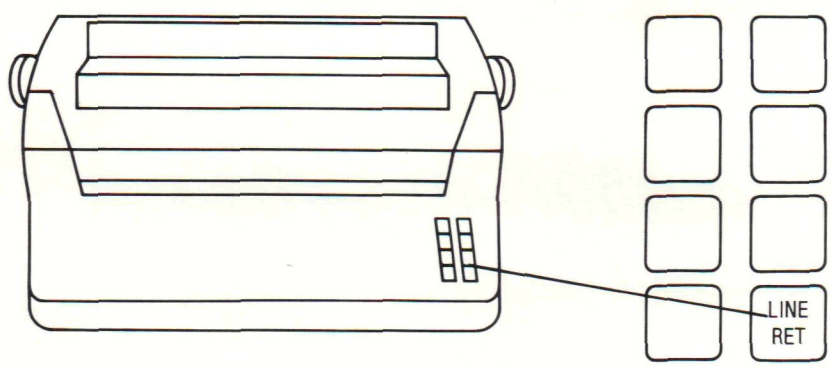
```
Generally, most of the poeple in this company are busy
with their daily business.
```

You cannot backspace over a carrier return; however there is a way to correct such an error—you can move the pointer back to the error, delete the incorrect word, and insert the correct one.

> Type the illustration above, including the deliberate error.

---

The LINE RET (Line Return) Button is used to move the pointer back to the beginning of the line containing the error.



A line return is like a big backspace except it does not delete text from memory.

If you are in the middle of a line when you notice an error in the previous line (such as in this illustration), depressing LINE RET one time moves the pointer back to the beginning of the line you are typing.

```
Generally, most of the poeple in this company are busy
with their daily business
```

Depress LINE RET one time. Notice that the carrier returns to the next typing line on your paper.

---

Depressing LINE RET again moves the pointer back to the beginning of the preceding line—in this illustration, the line containing the error.

```
Generally, most of the poeple in this company are busy
with their daily business
```

Depress LINE RET again to move the pointer to the beginning of the line containing the error. Notice that the carrier "bounces," but the paper does not index.

---

The pointer is moved to the incorrect word by playing back.

```
Generally, most of the poeple in this company are busy
with their daily business
```

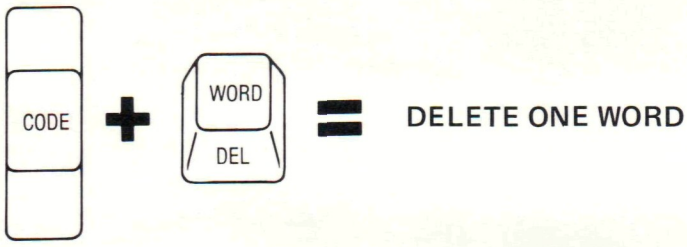
Use WORD to play back "Generally, most of the".

Your copy will look like this:

```
Generally, most of the poeple in this company are busy
with their daily business
Generally, most of the
```

The next step is to delete the incorrect word "poeple".

A word is deleted by holding the CODE Button while depressing WORD. When you code WORD, the carrier will bounce. This lets you know the word has been deleted.




Hold the CODE Button and depress WORD to delete "poeple". (Remember: a space, tab, or carrier return is a part of the word it follows.)

---

With "poeple" deleted, the text in memory looks like this.

```
Generally, most of the ^in this company are busy
with their daily business
```

Notice that deleting the word "poeple" did not leave a gap in memory.

---

The correct word is inserted by typing it and the space following it.

As you type "people", the pointer and words following it are pushed over.

```
Generally, most of the peo^in this company are busy
with their daily business
```

Type the correct word "people". Remember to end with a space.

After you have typed the correct word, your copy should look like this:

```
Generally, most of the poeple in this company are busy
with their daily business
Generally, most of the people
```

---

The text in memory is now correct, but the pointer is in the middle of a line.

```
Generally, most of the people▲in this company are busy
with their daily business
```

---

To resume typing, the pointer must be moved to the end of the text. This is done by playing back to where you stopped typing.

```
Generally, most of the people in this company are busy
with their daily business▲
```

Depress AUTO to play back to the end of the text.
Clear memory; go to the next exercise.

## EXERCISE NO. 6

Use the paragraph below to practice using LINE RET to correct errors.

Follow these steps:

1. Type to the first (√) mark, make the deliberate error, "sued".
2. Line return two times; use WORD to play through "commonly"; delete "sued"; type "used".
3. Depress AUTO to play to where you stopped typing.
4. Continue typing to the next (√) mark; make the deliberate error which is circled.
5. Line return two times; play by WORD to the error.
6. Delete the incorrect word; type the correct word.
7. Depress AUTO to play to where you stopped typing.
8. Follow steps 4-7 to complete the exercise.
9. Play back final copy.
10. Clear memory.

**PRACTICE COPY:**

```
IR
    The two most commonly sued measurement systems in the world are
the English, or customary (in which length si measured in inches, feet,
yards, etc.) and the metric systen (in which length is measured in
centimeters, meters, kilometers, etc.). 2CR
```

---

If you notice an error immediately after you have carrier returned, the pointer is at the beginning of the line.

```
Generally, most of the poeple in this company are busyCR
```

Therefore, depressing LINE RET one time moves the pointer to the beginning of the line with the error.

```
Generally, most of the poeple in this company are busy CR
```

---

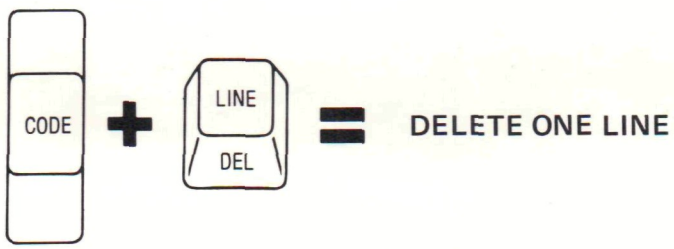
If you inadvertently type with your fingers on the wrong keys:

```
Generally, most of the people in this company are busy
wotj tjeor dao;u bisomess ;ofe amd
```

Line return and delete the line.

---

To delete a complete line, hold the CODE Button and depress LINE.




---

A carrier return by itself is also considered a line.

```
Generally, most of the people in this company C
R
CR
```

To delete a carrier return on a line by itself:

- Line return once.
- Code LINE to delete the carrier return.

If the incorrect word is the last word in a line:

```
Generally, most of the people in this company are buzy
with their daily business life and
```

- Line return to the line containing the error.
- Play to the incorrect word.
- LINE DEL (code LINE) to delete the incorrect word. (Using LINE DEL assures that there are no extra spaces and/or carrier returns left in memory.)
- Retype the correct word; end with a carrier return.

---

## EXERCISE NO. 7

Use the paragraph below to practice using LINE RET to correct errors.

Follow these steps:

1. Type the exercise exactly as shown, including the deliberate errors.
2. When you reach a (✓) mark, stop typing.
3. Line return to correct the error. Remember to take out unwanted carrier returns by using LINE DEL.
4. Complete the project.
5. Play back final copy.
6. Clear memory.

### PRACTICE COPY:

```
It is vital that all those suing the same system agree on the units
and the standards. Otherwise, results of measurements made by one preson
would have no relevance to someone else's measurements made with different
units and standards.
```

## YOU HAVE NOW LEARNED:

- A line return is like a big backspace except it does not delete text from memory—it moves the pointer back to the beginning of a line.

- An error in the previous line of typing is corrected by:
  - Line returning to the line with the error.
  - Playing back to the incorrect word.
  - Deleting the incorrect word(s).
  - Typing the correct word(s).
  - Playing back to where you stopped typing.

- A word is deleted by holding the CODE Button while depressing WORD. (A space, tab, or carrier return is a part of the word it follows.)

- A line is deleted by holding the CODE Button and depressing LINE.

- A carrier return on a line by itself is considered a line.

- Line delete is used to delete the last word in a line.

---

In this section you have learned how to use LINE RET to correct an error you did not catch immediately.

As you proceed through the book, continue to use the backspace correction method and the LINE RET correction method to correct the errors you are immediately aware of.

Do not worry about errors you did not notice or could not correct; in a later section you will learn how to correct and revise a page that has been completed.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## REQUIRED HYPHENS

Some hyphens are required and must print, regardless of where they appear in the line during playback.

For example, the hyphens in a word such as mother-in-law must always print.

```
mother-in-law

first-rate
```

---

Also, dashes—whether you use a space/hyphen/space or two hyphens —must always print.

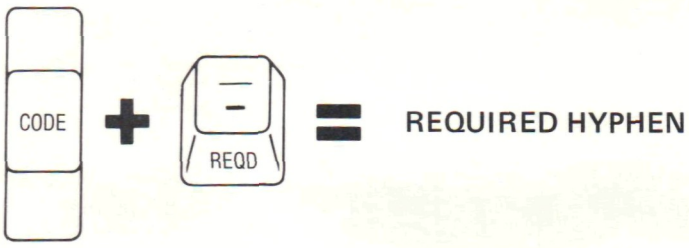
```
The seasons of the year--spring, summer, fall, and
winter--are not capitalized.
```

```
The seasons of the year - spring, summer, fall, and
winter - are not capitalized.
```

These hyphens are considered Required Hyphens.

---

To type a Required Hyphen, hold the CODE Button while you type the hyphen.




A Required Hyphen may be deleted by backspacing.

> To practice typing Required Hyphens, go to the next exercise.

## EXERCISE NO. 8

Use the paragraph below to practice typing Required Hyphens.

Follow these steps:

1. Type the practice copy exactly as shown; Required Hyphens have been circled.
2. Remember to space twice after all ending punctuation.
3. Play back final copy. Notice that the syllable hyphens are deleted; the Required Hyphens always print.
4. Clear memory.

### PRACTICE COPY:

IR

We had a hard-working staff--and devoted volunteers. In committees and as individuals they have given remarkable service to our community. Paying your dues promptly will help to continue this nonpartisan work. But ever-rising costs put our 1971-1972 program in jeopardy. Now your generous extra contribution is essential--never in our ten-year history has so critical a need arisen. 2 CR

## REQUIRED SPACE

Since the typewriter will end a line after a space; names, dates, and abbreviations may be divided at the end of a line.

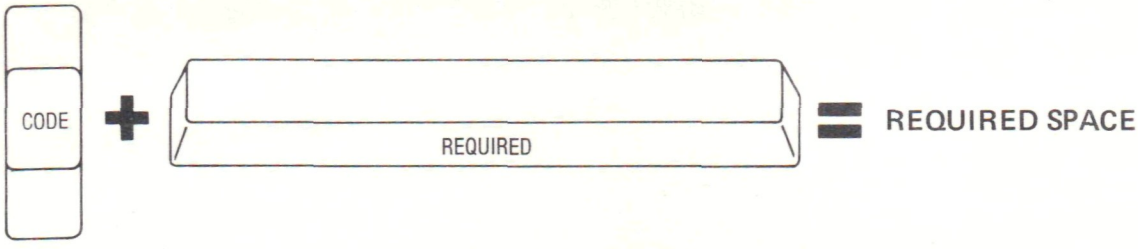
———————— Jane
Jones

———————— July
1,1970

———— Washington, D.
C.

If you do not want this, these items must be typed with Required Spaces between words. The typewriter will not end a line at a Required Space.

To type a Required Space, hold the CODE Button while you type the space.




A Required Space is deleted from memory by backspacing.

## EXERCISE NO. 9

Use the memo below to practice typing Required Spaces.

Follow these steps:

1. Type the exercise exactly as shown. Type Required Spaces where the check marks (√) appear on the copy.
2. Play back final copy.
3. Clear memory.

### PRACTICE COPY:

IR

September 5, 1972

Memo To: John James

Subject: Explorer Post 92

Reference: Plant Tour

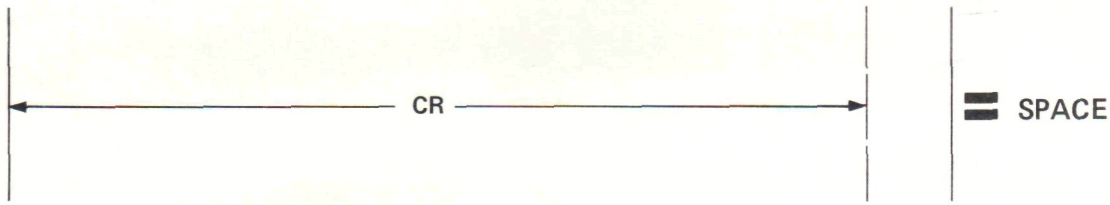
This is to confirm our telephone conversation concerning a tour of the plant facilities and a demonstration of some of our products for Post 92. Again, I must make clear that the tour arrangements for September 15 have been made only for members and advisors of Post 92.

I will meet your group in the Main Lobby. I plan to be there at 6:45 p.m., so we will be able to start the tour as close as possible to 7:00 p.m. The tour and demonstration takes about two hours.

Eric Smith

## REQUIRED CARRIER RETURN

As you know a single carrier return which plays back in the middle of a line is changed to a space.



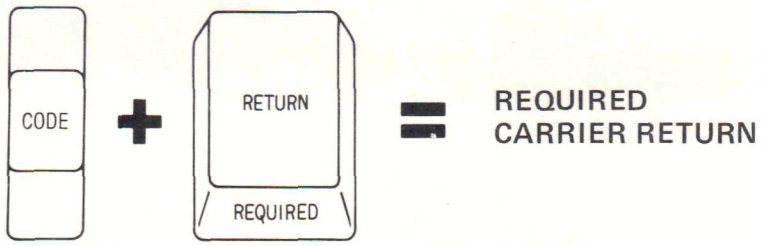

- Type your name and address as you would on an envelope; then play it back. (Notice that the single carrier returns are changed to spaces and your name and address prints on one line.)
- Clear memory.

---

When a carrier return must play back as a carrier return, as in your address, type a Required Carrier Return Instruction (RCR).

The typewriter will not change a Required Carrier Return to a space during playback.

A Required Carrier Return is typed by holding the CODE Button and typing a carrier return.




To delete a Required Carrier Return, line return and line delete.

- Type your name and address again; this time end each line with a Required Carrier Return.
- Play back your name and address.
- Clear memory.

## EXERCISE NO. 10

Use the paragraph below to practice typing Required Carrier Returns (RCR).

Follow these steps:

1. Type the exercise exactly as shown. Type Required Carrier Returns where they are marked on the copy (RCR).
2. Play back final copy.
3. Clear memory.

### PRACTICE COPY:

IR
Question No. 10 RCR
What is a Patent? RCR
But exactly what is a patent? The U. S. Patent Office defines it as a "grant issued by the United States Government giving an inventor the right to exclude all others from making, using, or selling his invention within the United States, its territories, and possessions for a specified number of years."2 CR

### YOU HAVE NOW LEARNED:

- To type the following special instructions:
  - Required Hyphen (code hyphen)
  - Required Space (code space)
  - Required Carrier Return (code carrier return)
- To use Required Hyphens in a word such as mother-in-law.
- To type names, dates, and abbreviations with Required Spaces.
- To type a Required Carrier Return (RCR) when a carrier return must play back as a carrier return.
- To delete a carrier return or a Required Carrier Return by line returning and using line delete.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## WORD UNDERSCORE

The Word Underscore Instruction provides automatic underscoring.

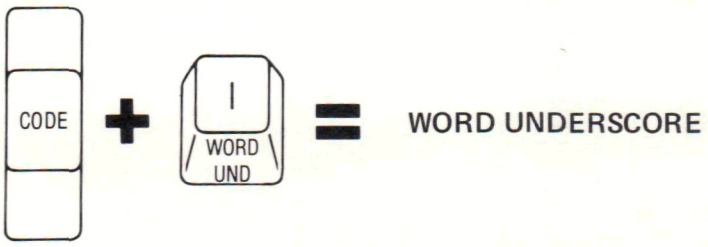
When a Word Underscore is typed and played back, the typewriter backs up until it finds:

- a space
- a tab
- a carrier return
- another Word Underscore Instruction
- a Required Backspace*

and underscores the word.

---

To type a Word Underscore Instruction, hold the CODE Button and type an "i".




This action inserts a Word Underscore Instruction at that point in the text.

---

To underscore a word:

- Type the word to be underscored; do not space.
- Type the Word Underscore Instruction (WU). The carrier backs up to the beginning of the word and underscores the word.
- Type any punctuation following the word.




*You will soon learn to type this special instruction.

If you notice an error in the line after you have typed the Word Underscore Instruction:

```
are the country's greatset assets.  Most
```

or in the underscored word:

```
are the country's greatest assets.  Msot
```

You must use the line return correction method.

---

## EXERCISE NO. 11

Use the paragraph below to practice typing the Word Underscore Instruction.

Follow these steps:

1. Type the copy exactly as shown. To underscore a word:
   - Type the word; do not space.
   - Type a Word Underscore Instruction (code "i").
2. DO NOT play back this exercise yet; leave it in memory.

**PRACTICE COPY:**

IR It is wise to always underscore words one at a time when typing. This makes later revisions of your recorded materials easier to do. If you find it absolutely necessary to underscore several words consecutively, your ability to change recorded material is limited. 2 CR

---

When playback stops for hyphenation of an underscored word:

- Play by CHAR to the end of a syllable.
- Type a Word Underscore Instruction (code "i") and wait for the typewriter to underscore.
- Type a hyphen; depress AUTO.

- Play back the exercise; hyphenate when necessary.
- Clear memory.

If the word to be underscored contains a Required Hyphen and is typed like this:

first-class wu

only the last half of the word will be underscored if it is divided at the end of a line during playback since the Word Underscore Instruction is after "class".

——————————— first-

class ———————————

Therefore, to underscore a word containing a Required Hyphen, follow this procedure:

- Type the first word.
- Type a Word Underscore Instruction.
- Type the Required Hyphen.
- Type the next word.
- Type another Word Underscore Instruction.

first wu -class wu

---

To underscore a word that is divided at the end of a line:

——————————— auto-

matic———————————

- Type the first part of the word.
- Type a Word Underscore Instruction.
- Type the hyphen; carrier return.
- Type the rest of the word.
- Type a Word Underscore Instruction.

——————————— auto- wu

wu

matic———————————

As you have seen, the typewriter does not underscore regular spaces.

they will not meet

Therefore, if a heading is to be solidly underscored:

The Third Man

type Required Spaces between the words,

The RS Third RS Man

and type the Word Underscore Instruction after the last word only.

The RS Third RS Man WU = The Third Man

To underscore a heading solidly, follow this procedure:

- Type the entire heading with Required Spaces between the words.
- Type the Word Underscore Instruction after the last word.

---

## EXERCISE NO. 12

Use the paragraph below to practice typing the Word Underscore Instruction.

Follow these steps:

1. Type the exercise exactly as shown. Remember to:
   - Type Required Spaces when you want to solidly underscore a line.
   - Underscore each part of a hyphenated word separately.
2. Play back final copy.
3. Clear memory.

**PRACTICE COPY:**

1R

For the "Smart Secretary"

Every secretary should have at least one reliable and very current handbook to use as a quick-reference when a problem arises. This instant reference can save many headaches and buckets of tears, especially for the beginning secretary, by providing quick, correct answers to every question about office procedures. After all, your success as a secretary depends on your ability to do every job you attempt well. 2CR

## YOU HAVE NOW LEARNED

- To type a Word Underscore Instruction, hold the CODE Button and type an "i".

- When a Word Underscore Instruction is typed, the typewriter backs up until it finds:
  - A space.
  - A tab.
  - A carrier return.
  - Another Word Underscore Instruction.
  - A Required Backspace.

- To hyphenate an underscored word during playback:
  - Play back to the end of a syllable.
  - Type a Word Underscore Instruction.
  - Type the hyphen; depress AUTO.

- To underscore a "word" containing a Required Hyphen:
  - Type the first word.
  - Type a Word Underscore Instruction.
  - Type the Required Hyphen.
  - Type the next word.
  - Type another Word Underscore Instruction.

- To underscore a heading solidly:
  - Type the entire heading with Required Spaces between the words.
  - Type the Word Underscore Instruction after the last word.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## CENTERING

AGENCY CONTRACT

between

HERBERT A. BROWN

and

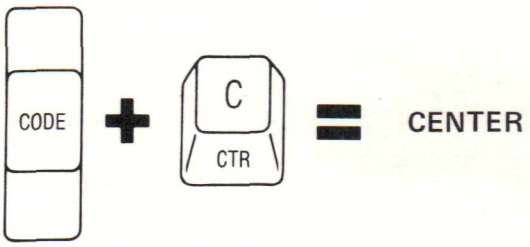
ALEXANDER J. STEPHENSON

Lines may be centered automatically by:

- Tabbing (and/or spacing) to the center of the page.
- Typing a Center Instruction.
- Typing the line to be centered.

---

To type a Center Instruction, hold the CODE Button and type a "c".




---

Nothing prints as you type the line; however, you will see the carrier backspace once for every two characters that you type.

AG = **Carrier will back up one space**

---

As soon as you type:

- a carrier return
- a tab
- a Word Underscore
- an Index Return
- a Required Backspace*

the centered line will print on your paper.

AGENCY CONTRACT

*You will soon learn how to type this special instruction.

If you make a mistake while typing the line:

- Backspace once. This takes you back to the Center Instruction.
- Retype the words to be centered.

If you notice an error after the line has printed:

- Line return.
- Line delete.
- Retype the line, including the tabs and Center Instruction.

To delete a Center Instruction:

- Carrier return.
- Line return.
- Line delete to delete the tabs.

---

## EXERCISE NO. 13

Use the lines below to practice typing the Center Instruction.

Follow these steps:

1. To center the lines:
   - Tab (and/or space) to the centering dot on the margin scale.
   - Type a Center Instruction (code "c").
   - Type the line to be centered; end with a carrier return.
2. As you type the line, remember that you can backspace to correct an error. Backspacing takes you back to the Center Instruction.
3. Play back final copy.
4. Clear memory.

**PRACTICE COPY:**

```
International Business Machines Corporation
        Office Products Division
           Parson's Pond Drive
        Franklin Lakes, New Jersey
```

To underscore a centered heading solidly:

| AGENCY CONTRACT |

- Type the heading with Required Spaces between the words.
- Type a Word Underscore Instruction (code "i") after the last word.

| AGENCY CONTRACT |

Type the illustration above. Play back the line; then clear memory.

---

As you have just seen, a Word Underscore Instruction causes the line being centered to print. Therefore, if each word of a centered line is individually underscored:

| AGENCY CONTRACT |

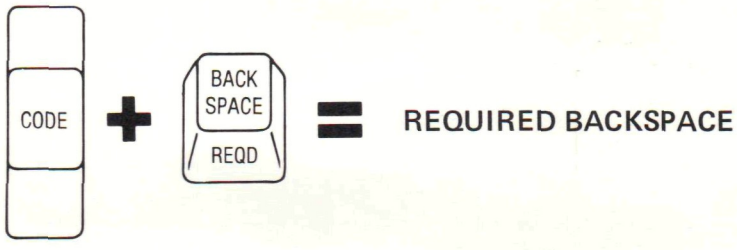
the Word Underscore Instruction cannot be used. Instead, these words must be underscored manually—just as you would on a typewriter.

---

## REQUIRED BACKSPACE

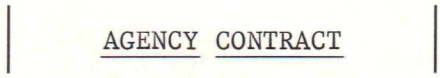
The Required Backspace Instruction is used to move the carrier back to the desired position. Remember, regular backspaces delete text from memory.

A Required Backspace is typed by holding the CODE Button while depressing the backspace key.

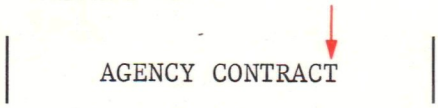



A Required Backspace also causes a centered line to print.

To individually underscore words in a centered line:




- Tab and/or space to the center point.
- Type a Center Instruction (code "c").
- Type the line to be centered.
- Type a Required Backspace Instruction (code backspace). The line will print; the carrier will stop over the last character in the centered line:




- Type enough Required Backspaces to move the carrier back to the first character in the line.
- Type the underscores.
- Carrier return.

> Follow these steps to type the illustration shown above. Play back the line; clear memory.

---

## EXERCISE NO. 14

Use the lines below to practice underscoring centered lines.

Follow these steps:

1. Use the Center Instruction to center each of the lines below. Remember:
   - Use Required Spaces when the heading is solidly underscored.
   - End the line with a Required Backspace when each word must be underscored individually.
2. Play back final copy.
3. Clear memory.

### PRACTICE COPY:

> WADESTAMP MANAGEMENT COMPANY, INC.
>
> Final Draft
>
> NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

## YOU HAVE NOW LEARNED:

- To type a Center Instruction, hold the CODE Button and type a "c".

- The steps to center a line:
  - Tab and/or space to the center point.
  - Type a Center Instruction.
  - Type the line to be centered.

- A centered line will print when you type:
  - A carrier return.
  - A word Underscore Instruction (code "i").
  - A Required Backspace (code backspace).
  - A tab.
  - An Index Return (code index).

- Backspace to correct any error you make while typing a centered line.

- Backspacing takes you back to the Center Instruction.

- To delete a Center Instruction:
  - Carrier return.
  - Line return.
  - Line delete.

- To underscore a centered line solidly:
  - Type Required Spaces (code space) between the words.
  - End the line with a Word Underscore Instruction.

- To underscore words individually in a centered line:
  - End the line with a Required Backspace (code backspace).
  - Type enough Required Backspaces to move the carrier back to the beginning of the line.
  - Type the underscores.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## TABLES AND COLUMNAR PROJECTS

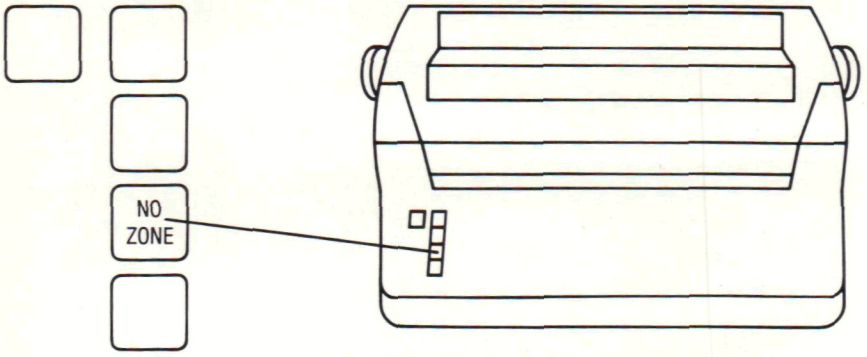
You have seen how the typewriter changes line endings automatically. There are times, however, when you do not want the line endings to change. For example, a table should play back line-for-line, exactly the way it was typed.

Applications for Patents: 1860-1965

| Year | Number | Year | Number |
|---|---|---|---|
| 1860 | 7,653 | 1920 | 86,575 |
| 1870 | 19,171 | 1930 | 93,752 |
| 1880 | 22,395 | 1940 | 69,484 |
| 1890 | 40,930 | 1950 | 74,108 |
| 1900 | 41,898 | 1960 | 84,246 |
| 1910 | 64,448 | 1965 | 94,632 |

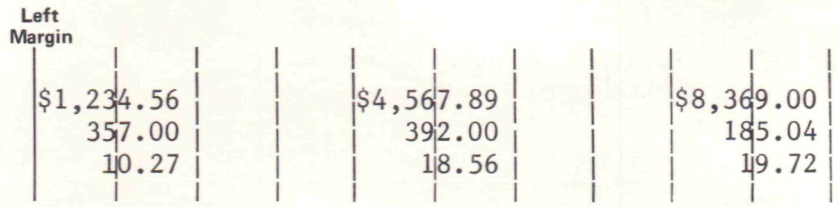
---

When NO ZONE is locked down, there is no Line End Zone; line endings do not change. Therefore, a table is always typed and played back with the NO ZONE Button down.



There are many times when you will be able to use the tab grid* for typing tables.

To type a table on a tab grid, use only the tab stops you need; tab through the others.




---

To correct an error in the number you are typing:

1,23e5

Backspace to the error and retype.

---

To correct an error in a previous column:

1,k34 1,

- Line return.
- Line delete.
- Retype the line.

> To practice typing a table using the tab grid, go to the next exercise.

*Remember, tabs set an equal distance apart form a tab grid.

## EXERCISE NO. 15

Use the copy below to practice typing a table using the tab grid.

Follow these steps:

1. Depress NO ZONE.
2. Type the table below using the tab grid. The broken lines on the practice copy represent the tab grid. (Hint: tab twice between each column.)
3. Remember: if you make an error in a number, backspace to correct. If you tab too many times, or notice an error in a previous column, line return, line delete, and retype the line.

**PRACTICE COPY:**

IR

INVENTORY

(By Floor)

| | | | | | |
|---|---|---|---|---|---|
| Tables | 15 | 16 | 17 | 21 | 22 | 23 |
| Chairs | 23 | 78 | 56 | 34 | 23 | 87 |
| Desks | 45 | 87 | 34 | 15 | 34 | 19 |
| Files | 7 | 8 | 4 | 7 | 9 | 2 |

2CR

To play back:

Depress PAGE START; depress AUTO.

To see what happens when you play back without NO ZONE down:

1. Release NO ZONE.
2. Play back the exercise.
3. Clear memory.

To center column headings:

| 1970 | 1971 | 1972 |
|---|---|---|
| $1,234.56 | $4,567.89 | $8,369.00 |
| 357.00 | 392.00 | 185.04 |
| 10.27 | 18.56 | 19.72 |

- Tab and/or space to the center of the column.
- Type a Center Instruction (code "c").
- Type the heading.
- Tab. The line will print and the carrier will move to the next tab stop.
- Tab to the next column, or carrier return after the last column.

> Type the illustration using the steps above. Play back final copy; clear memory.

---

To underscore a column of numbers:

```
$1,120,000.00
   650,000.00
   750,000.00
     9,000.00
_____________
```

- Type the number.
- Type Required Backspaces to move the carrier back to the beginning of the column.
- Type the underscores.

## EXERCISE NO. 16

Use the copy below to practice typing a table with headings.

Follow these steps:

1. Depress NO ZONE.
2. Type the exercise:
   - Use the Center Instruction to center all headings.
   - Use the Word Underscore Instruction to underscore headings.
   - Use Required Backspaces to underscore the columns.
3. Play back final copy.
4. Clear memory.

**PRACTICE COPY:**

IR

Payments for Other Services Abroad
(in millions of dollars)

| | January | April | July | October |
|---|---|---|---|---|
| Travel expenditures overseas | 1,744 | 1,474 | 1,905 | 2,071 |
| Transportation | 1,988 | 1,949 | 2,055 | 2,154 |
| Miscellaneous services | | | | |
| Private | 450 | 451 | 436 | 434 |
| Government (excluding military) | 313 | 407 | 400 | 421 |
| Income on foreign investments in U. S. | | | | |
| Private | 607 | 604 | 656 | 796 |
| Government | 332 | 278 | 339 | 400 |
| Total | 5,434 | 5,163 | 5,791 | 6,276 |

2CR

You can probably use the tab grid for most of your work. However, if you do need to change the tabs, you can do so quickly.

To clear all tabs:
- Hold the CLR end of the CLR/SET key.
- Type a carrier return.

To set individual tabs:
- Space to the desired tab position.
- Depress the SET end of the CLR/SET key.

To reset the tab grid:
- Hold the SET end of the CLR/SET key.
- Type a carrier return.

Remember: depress TPWR before making typewriter adjustments—such as setting tabs.

---

## EXERCISE NO. 17

Use the copy below to practice typing a table with individually set tabs.

Follow these steps:

1. Depress TPWR.
2. Clear the tab grid by holding down the CLR end of the CLR/SET key while you carrier return.
3. Set tabs at 64 and 82.
4. Release TPWR. (Remember NO ZONE is down when you type a table.)
5. Type the table; use any of the correction methods you have learned.
6. Play back final copy.
7. Clear memory.
8. Depress TPWR and reset the tab grid:
   - Hold the SET end of the CLR/SET key and carrier return.
9. Release TPWR.

**PRACTICE COPY:**

IR

| | | |
|---|---|---|
| Gross National Product | 10,289 | 676,568 |
| National Income | 1,331 | 555,320 |
| Personal Income | 332 | 5,319 |
| Disposable Personal Income | 16,275 | 465 |
| Personal Consumption Expenditures | 2,254 | 4,289 |
| Personal Taxes | 36 | 65 |
| Compensation of Employees | 224 | 392 |
| Corporate Profits | 476 | 731 |
| Dividends | 10 | 19 2 CR |

## TABLES WITH TEXT

Tables are sometimes mixed with regular text.

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly.

| STUDENT | TIME | COMPANY--INTERVIEWER |
|---|---|---|
| Robert Carlson | 1:45 | Slowing Airline--E. Jones |
| Joe Haley, Jr. | 2:00 | Ace Liability Finance--B. Ace |
| Francis Hill | 2:15 | Mill Electronics--C. Scott |
| Peter Redick | 3:00 | Atherton Machine--J. Bailey |
| Linda Stahl | 3:15 | Graham Telephone--L. Grady |

All interviews will be in the Student Union Building--second floor ballroom. Copies of your transcripts must be presented at the time of the interview.

---

The NO ZONE Button must be down when you type a table in the middle of text.

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly.

No Zone Down

| STUDENT | TIME | COMPANY--INTERVIEWER |
|---|---|---|
| Robert Carlson | 1:45 | Slowing Airline--E. Jones |
| Joe Haley, Jr. | 2:00 | Ace Liability Finance--B. Ace |
| Francis Hill | 2:15 | Mill Electronics--C. Scott |
| Peter Redick | 3:00 | Atherton Machine--J. Bailey |
| Linda Stahl | 3:15 | Graham Telephone--L. Grady |

All interviews will be in the Student Union Building--second floor ballroom. Copies of your transcripts must be presented at the time of the interview.

To type a project which has both text and tables, type with the NO ZONE Button up until you reach the first line of the table; then depress NO ZONE.

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly. CR
CR

DEPRESS NO ZONE HERE

---

## STOP INSTRUCTION

At the same time you depress NO ZONE, also type a Stop Instruction. The Stop Instruction stops playback automatically. When you play back, the typewriter will stop so you can depress NO ZONE to play back the table.

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly. CR
CR

TYPE STOP INSTRUCTION HERE

---

After typing the table and the carrier returns that follow, release NO ZONE and type another Stop Instruction.

| STUDENT | TIME | COMPANY--INTERVIEWER |
|---|---|---|
| Robert Carlson | 1:45 | Slowing Airline--E. Jones |
| Joe Haley, Jr. | 2:00 | Ace Liability Finance--B. Ace |
| Francis Hill | 2:15 | Mill Electronics--C. Scott |
| Peter Redick | 3:00 | Atherton Machine--J. Bailey |
| Linda Stahl | 3:15 | Graham Telephone--L. Grady CR |

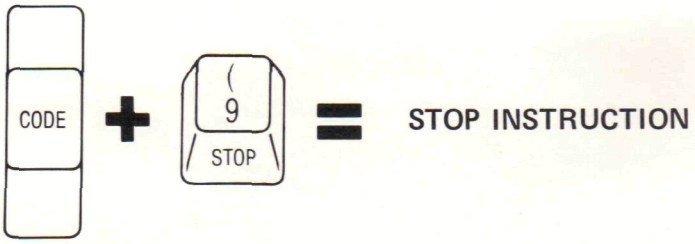
CR

All interviews will be in the Student Union Building--second floor ballroom. Copies of your transcripts must be presented at the time of the interview.

RELEASE NO ZONE AND TYPE STOP

When you play back, the typewriter will stop automatically at the Stop Instruction so you can release NO ZONE.

To type a Stop Instruction, hold the CODE Button and type a "9".




A Stop Instruction is deleted by backspacing.

---

The Stop Instruction is typed when you want to make any typewriter adjustment during playback. For example:

- To depress or release NO ZONE.
- To change tabs.
- To change from single to double spacing.
- To change the line length.

## EXERCISE NO. 18

Use the copy below to practice typing a table within text.

Follow these steps:

1. Release NO ZONE.
2. Type the first paragraph; end with two carrier returns.
3. Depress NO ZONE.
4. Type a Stop Instruction, indicated on the copy by S .
5. Type the table; end with two carrier returns.
6. Type a Stop Instruction; release NO ZONE.
7. Complete the exercise.

### PRACTICE COPY:

IR The following table tells the story not only in terms of total output per man-hour but in terms of agricultural output per man-hour and nonagricultural output per man-hour.

S

Output Per Man-Hour: 1910-1965
(Index: 1957-59 = 100)

| Year | Total | Agriculture | Nonagricultural Industries |
|---|---|---|---|
| 1910 | 35.1 | 34.0 | 40.5 |
| 1920 | 36.1 | 34.4 | 41.9 |
| 1930 | 46.1 | 37.0 | 52.9 |
| 1940 | 58.6 | 44.9 | 66.3 |
| 1950 | 80.6 | 65.3 | 84.6 |
| 1960 | 105.1 | 110.3 | 104.4 |
| 1965 | 125.3 | 143.6 | 122.4 |

S This increase in efficiency, in productivity--in certain industries it has been sharp--seems principally from the use of more efficient machinery and equipment and the utilization of the skills of a better educated, better trained labor force, a labor force which includes both management and labor. 2CR

To play back:

1. Depress PAGE START.
2. Depress AUTO. When playback stops, depress NO ZONE.
3. Depress AUTO to play back the table.
4. Release NO ZONE when playback stops at the end of the table.
5. Continue playback.
6. Clear memory.

The Stop Instruction can be used also to double underscore a column(s).

| | |
|---|---|
| $1,234,567.89 | $7,863,594.77 |
| 650,098.00 | 492,881.34 |
| 750,000.00 | 656,722.48 |
| 9,000.00 | 8,300.00 |

Follow these steps to double underscore a column(s):

- Type the column(s) underscoring in the usual manner (Required Backspace/underscores).
- Carrier return.
- Type a Stop Instruction (code "9"). The Stop Instruction is to allow you to make the same machine adjustments—roll back paper, etc.—during playback.
- Use the platen variable knob to position the typing line very close to the first line of underscores.
- Type the second line of underscores.

> Practice typing a double line of underscores using the illustration and instructions above. Play back; clear memory.

## CHANGING LINE LENGTH

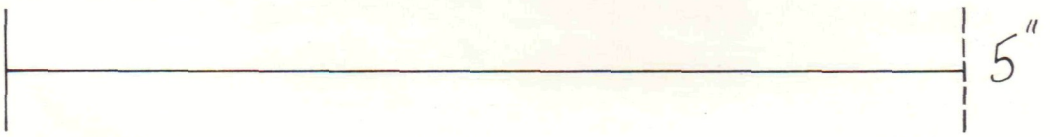
Most of the time you will be using the 6-inch line length which is set automatically on your IBM Mag Card II.

Occasionally, however, you may have special typing jobs which require a different line length.

---

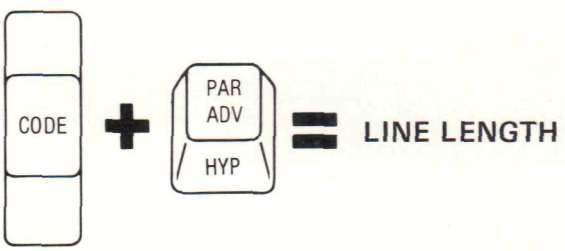
To change the line length:

- Depress TPWR.
- Return the carrier to the left margin.
- Space (or tab) to the desired line length.




---

The line length is set at this position by holding down the CODE Button and depressing PAR ADV.



Use the following letter to practice changing line lengths:

1. Depress TPWR.
2. Return the carrier to the left margin.
3. Space to the correct position for a 5-inch line length (78 on the 12-pitch scale).
4. Code PAR ADV.
5. Release TPWR.
6. Type the letter.
7. Page Start
8. Play back the letter.
9. Reset the original 6-inch line length.

May 15, 1973

Mr. George Rolls
Department of Education
2897 Connecticut Avenue, N. E.
Washington, D. C. 22206

Dear Mr. Rolls:

The Independent School District Ten has been granted funds to establish a Bilingual Demonstration and Dissemination Center to serve this entire area. On behalf of our staff, I would like to extend a formal invitation to you to visit our facilities.

We are tentatively scheduling your group on June 30, 1973. If this date is not convenient, please let us know as soon as possible.

Thank you for your interest in our work. We are looking forward to seeing you soon.

Sincerely,

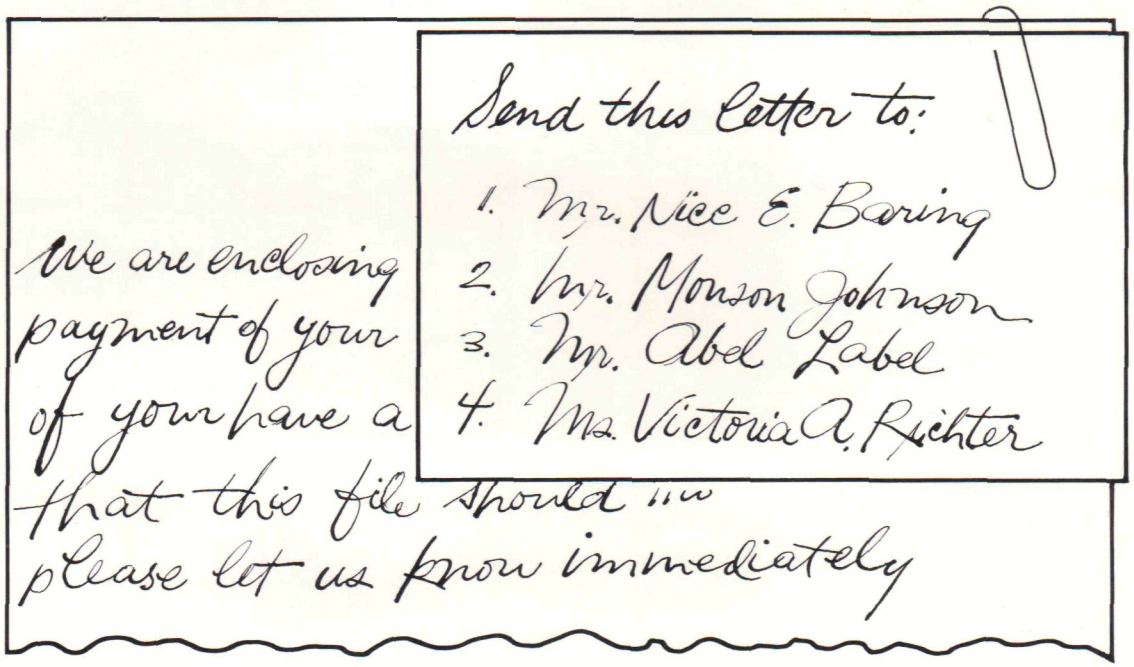
Joseph T. Goodall
Executive Director

JTG/mm

Remember, anytime you turn off the typewriter, when you turn it back on again, the original six-inch line length is automatically reset. Clearing memory does not reset the line length.

## REPETITIVE LETTERS

Suppose you have just been given a letter, such as the one below. You want to send an original letter to each of the people on the list.




---

Type this letter without a name and address. Instead, put Stop Instructions where the name and address will appear.

During playback you can manually type in the appropriate name and address.

Date

Typed Manually During Playback

S
Name
Address

S
Dear Name :

_____

_____

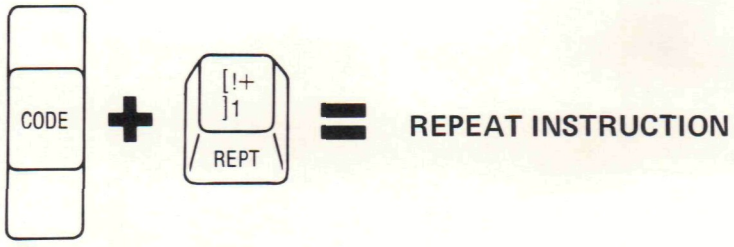
_____

_____

_____

/bh

A Repeat (REPT) Instruction typed at the end of the letter, automatically moves the pointer back to the beginning to repeat playback.




The Repeat Instruction causes continuous playback. Therefore, type a Stop Instruction at the beginning of the letter to let you change the paper.

---

The letter will look like this:

IR

S Date

S

Name
Address

Dear S Name :

_____
_____
_____

_____

_____

/bh 2 CR
REPT

## EXERCISE NO. 19

Use the exercise below to practice typing a letter sent to several people.

Follow these steps:

1. Type the letter shown in the practice copy:
   - Type the usual Index Return.
   - Do not type anything enclosed in a [redacted]
   - Type a Stop Instruction where indicated on the copy.
   - End with two carrier returns and a Repeat Instruction (code "1").
   - Do not worry about mistakes you did not catch. You will learn how to correct later.
2. DO NOT CLEAR MEMORY. You will play back the letters in a few minutes.

**PRACTICE COPY:**

IR
S
Date

6 CR

S
Inside Address
2 CR S
Dear S Name:
P

We are enclosing our draft in full payment of your recent claim.

If you have any information to show that this file should not be closed, please let us know immediately.

Very truly yours,

John P. Henry RCR
Claims Supervisor

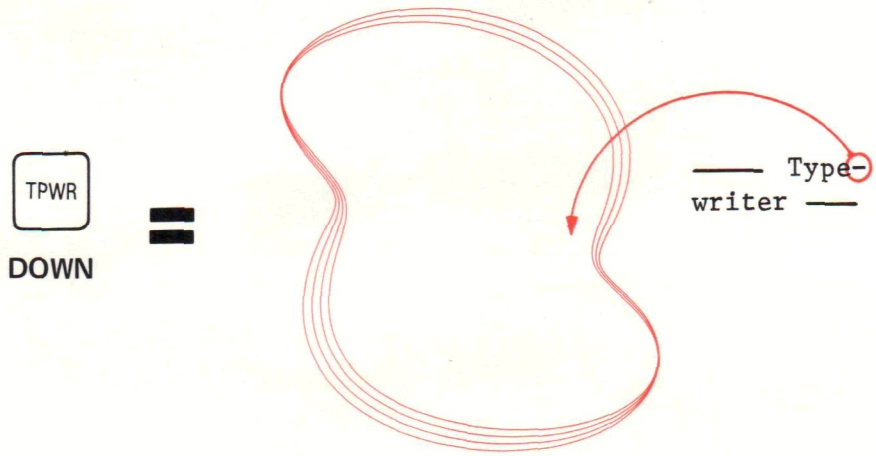
rjc 2 CR
REPT

## Playing Back Individual Letters

To create individual letters, the names and addresses are typed in manually during playback.

You do not want the names and addresses to go into memory; therefore, the letter is played back with the TPWR Button down.

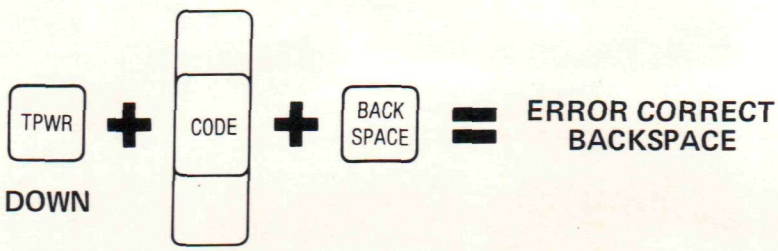
Although TPWR is down, hyphenation decisions made during playback will be entered in the memory. Thus a hyphen typed during playback will go into memory. This eliminates the necessity to make the same hyphenation decision each time the letter is played back.




---

If you make a mistake while typing the address, you can backspace and retype to correct.

The white tape is not activated automatically when TPWR is down. So, you must tell the typewriter when you are backspacing to correct an error. To do this, hold the CODE Button while you backspace.




The character typed after the Error Correct Backspace will print with the white tape; the carrier will not move forward.

Practice using Error Correct Backspace for the following types of errors:

- Correcting the last character typed:

```
Tht
```

1. Depress TPWR.
2. Type the word above making the error ("t" for an "e").
3. Error Correct Backspace (code backspace) one time.
4. Type a "t"; the carrier will not move.
5. Type an "e".

- Correcting several characters:

```
winnign
```

1. With TPWR down, type the word above transposing the "n" and "g".
2. Code backspace one time.
3. Type an "n".
4. Code backspace again.
5. Type a "g".
6. Retype "ng".

- Correcting a character in the middle of a word:

```
wonning
```

1. Type the word above making the mistake.
2. Code backspace to the "o".
3. Type an "o".
4. Type an "i".
5. Space to the end of the word and continue typing.

## EXERCISE NO. 20

Use the letter you have in memory to practice playing back individual letters.

Follow these steps:

1. Depress TPWR.
2. Insert paper.
3. Depress PAGE START, then AUTO. (To play back the first letter, depress AUTO twice.)
4. When playback stops, type the inside address. (Remember: use Error Correct Backspace—code backspace—to correct any errors.)
5. Play back to the next stop.
6. Type the name.
7. Depress AUTO to complete the letter.
8. Repeat steps 3-7 to play back the remaining letters.
9. Clear memory.

Send this letter to:

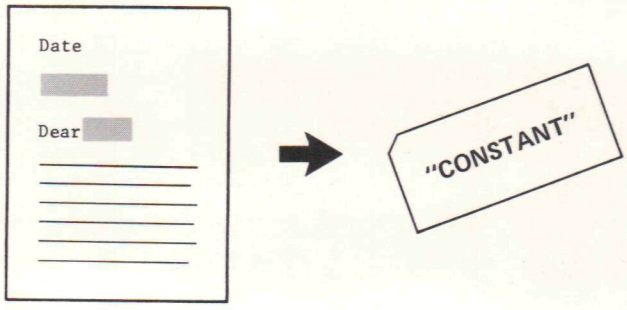
Mr. Nice E. Baring
1966 South First
San Francisco, California 94110

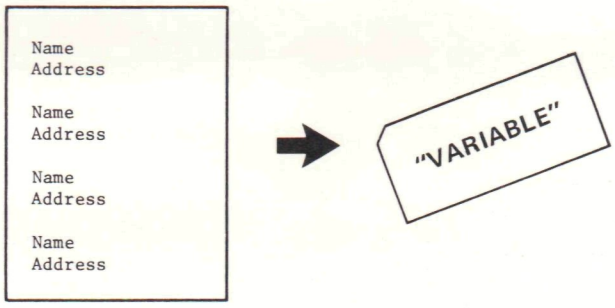
Mr. Monson Johnson
707 King Edward Drive
Scranton, Pennsylvania 36295

Mr. Abel Label
2603 Willow
Seattle, Washington 90401

When a letter is sent to many people, it can be prepared for automatic playback—prepared so you do not have to manually type the names and addresses.

The letter (or "constant" information) is typed and recorded on one card; the names and addresses ("variable" information) are recorded on another card(s).




You will learn how to prepare letters for automatic playback in a later section.

## YOU HAVE NOW LEARNED:

- NO ZONE is locked down to type, revise, or play back a table.
- When NO ZONE is down, line endings do not change.
- Column headings may be centered with the Center Instruction.
- The Required Backspace Instruction is used to move the carrier back when you don't want to delete text from memory.
- To underscore a column of numbers:
  - Type the number.
  - Type Required Backspaces to move the carrier back to the beginning of the column.
  - Type the underscores.
- The Stop Instruction stops playback at any point.
- When tables are mixed with text, type a Stop Instruction at the beginning of the table; type another Stop Instruction after the table.
- When playback stops before the table, depress NO ZONE. When playback stops after the table, release NO ZONE.
- You can use the tab grid for tables; or, you can clear the tab grid and set individual tabs.
- The Stop Instruction can be used to stop playback to type in variables, such as a name and address.
- When you are typing names and addresses on the final copy, with TPWR down, follow these steps to correct an error:
  - Type an Error Correct Backspace (code backspace).
  - Type the incorrect character.
  - Type the correct character.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

# Working with Cards

**Magnetic Cards**
**Using the Pack Feed Slot**

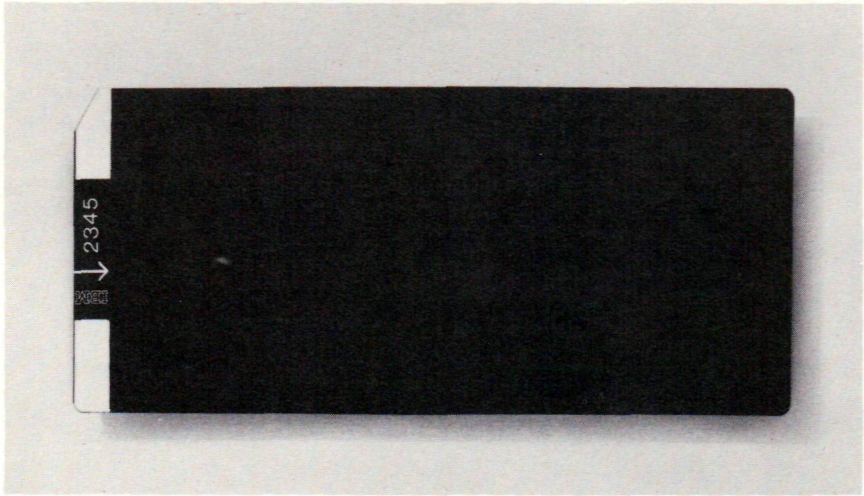




## MAGNETIC CARDS

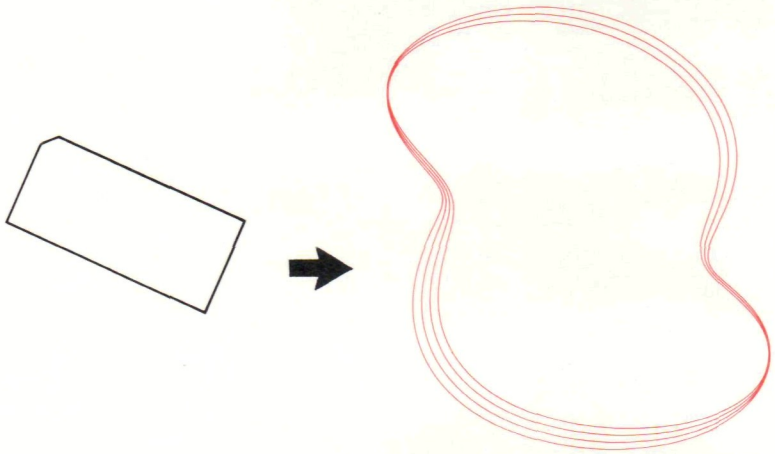
Up to now, you have not saved anything you have typed. At the end of each exercise you cleared the memory by typing a Clear Instruction.

In this section you will learn how to save everything you type into memory by recording it on a magnetic card.




---

Recording text on magnetic cards can save time! If a document comes back with author's changes, you do not have to retype it. Instead, the recorded card is "read" and the text is put back into memory.



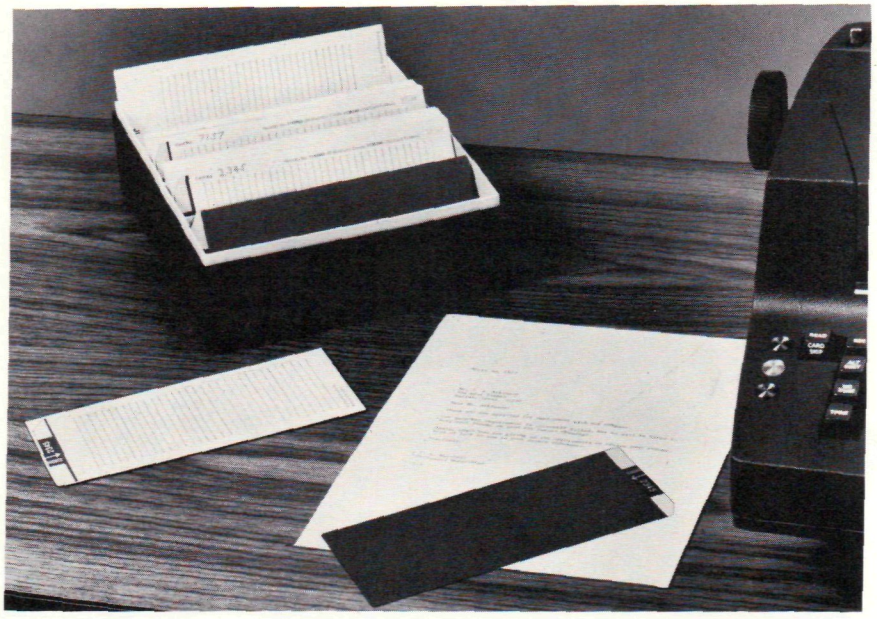
With the text back in memory, you can make the revisions and changes and then create a new, updated typewritten copy and matching card.

## Filing

When you are working with magnetic cards, you will need to set up a filing system so that you can locate a card or project quickly when you want to revise the document or play back a final copy.

Notice that the IBM Magnetic Card contains a writable area, as well as a four-digit number, for identification purposes. Notations in the writable area make possible immediate identification of a card.*

As you continue through the instructions, you will learn some card handling procedures. These procedures are suggested only as a basis for beginning. You may find with experience that another system will be more efficient in your office.



One system for filing cards is to classify your work into one of three general categories, based on the type of material.

**Daily Cards**
Work for which the author requires a retention period of no more than three working days. (Cards are actually retained five working days but authors are requested to return revisions within three working days.)

**Special Cards**
Work retained longer than three working days or work which requires heavy revisions.

**Stored Cards**
Documents or paragraphs retained permanently and used for automatic playback.

---

*Only certain types of ink are recommended for the writable area of the IBM Magnetic Card. See the printed card packaged with the cards for detailed information.

The procedure given below is one way to set up the Card Box to handle these three job classifications:

### Daily Cards

Section the daily file box into five daily tabs labeled 1 - 5, that is, 1 for Monday, 2 for Tuesday, etc.

Document Code: As a document is recorded on a card, it is coded with the secretary's initials and the code. For example, bmh 4/3 identifies the typist and notes the document as the third one typed on Thursday.

All of one day's cards are kept together in the sequence recorded and filed behind the appropriate tab.

### Special Cards

Special cards are filed by document in numerical sequence, that is, S/1, S/2, etc. For 1 to 5-page documents, place the cards in the small card folder. File the cards for longer documents in the project boxes which are designed to hold up to 25 cards per box. As you will soon learn, the cards will be kept in the folder in reverse order; that is, the first card on the bottom of the stack.

Document Code: When a document is recorded, it is coded with the project code under which it will be filed, for example, S/7. For multi-page projects, use this code only on the last page. Author, subject, and projected retention time may also be noted on the card folder or box. (During this training, you will be told to note the exercise number on the folders.)

Reuse of Cards: When a project has been completed, remove all cards from the project folder. Place these cards in the front of the card box, ready to be reused.

### Stored Cards

Copies of stored documents or paragraphs are kept in a binder. The corresponding cards may be kept in card folders opposite a sample of the stored document or filed separately in individual card folders in the file box.

If more than one department has stored work, the binder and the file are sectioned by department.

Document Code: Each stored item is given a department code and a number. Code A3 means Accounting Department, Letter 3.

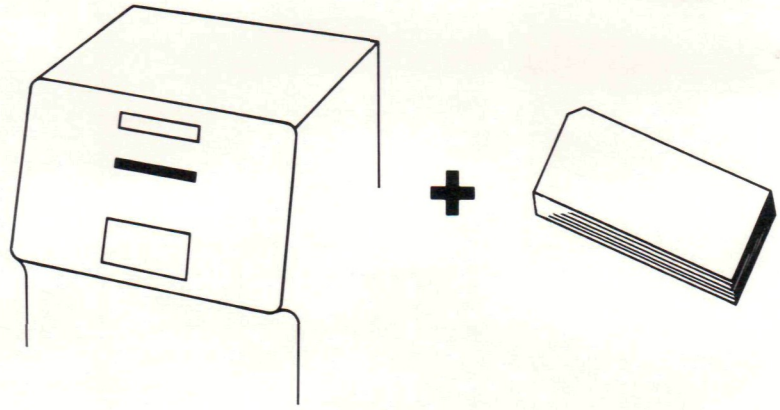
Filing and retrieval: Each card is marked with the document code and stored in a card folder in the card box or in a binder.

Set up your card file as follows:

1. Place the cards you will be using for recording in the front section of the card box.
2. Insert tabs labeled 1 to 5 in the next section for the Daily Cards.
3. Use the next two sections of the box for Special Cards and Stored Cards respectively.

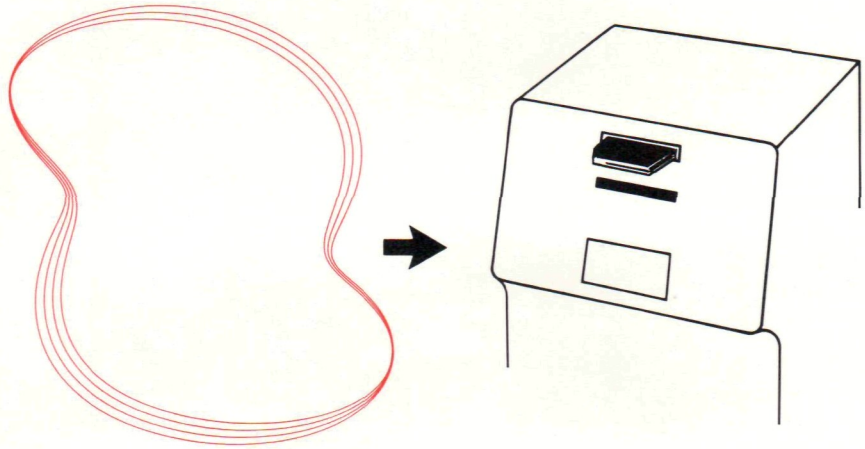
## USING THE PACK FEED SLOT

The Pack Feed Slot reduces card handling. Instead of working with one card at a time, you will be working with a stack of cards.

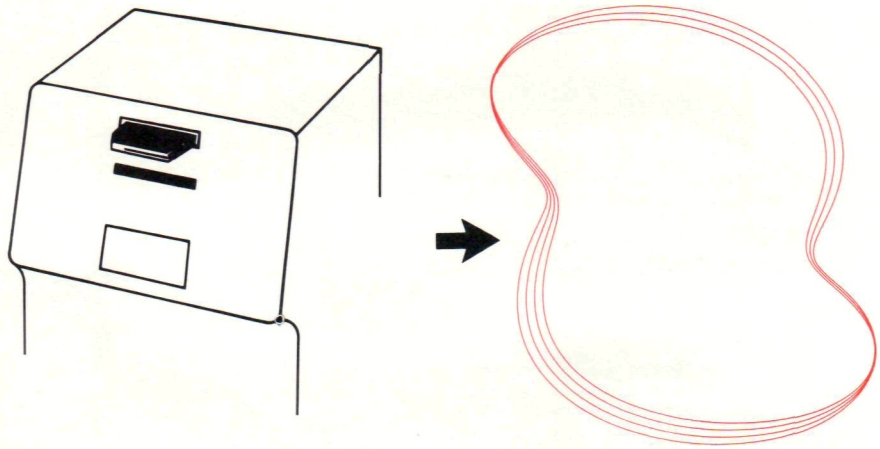


---

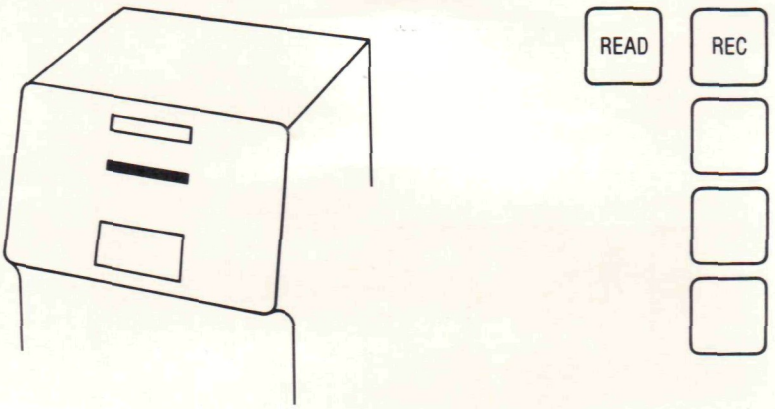
The cards in the Pack Feed Slot may be recorded on . . .



or read.



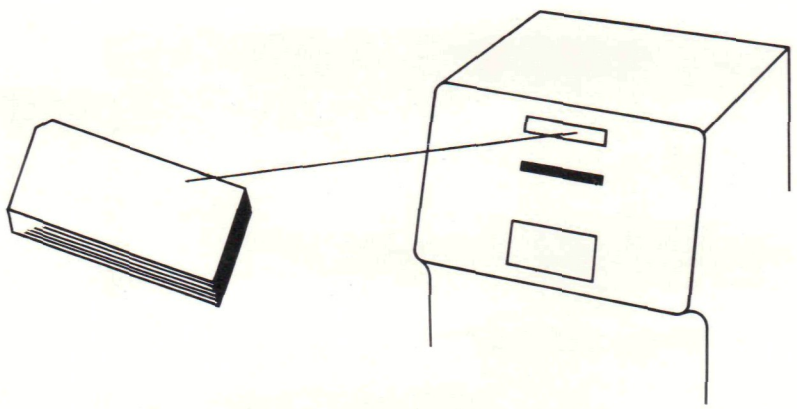
How the cards will be used is determined by which button is depressed first—READ or REC.




The button you depress sets up the typewriter to read or record the cards in the Pack Feed Slot.*

---

When you are typing a document for the first time and want to record it on magnetic cards for later revision or playback, "blank" cards (cards you can record on) are placed in the Pack Feed Slot.

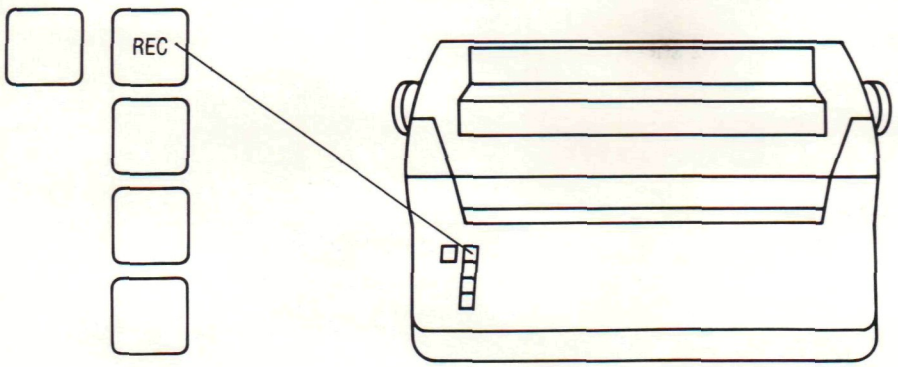


Load the Pack Feed Slot:

1. Hold a stack of cards (up to 50) by the numbered end with the numbers facing up.
2. Tap the unnumbered end of the stack on a flat surface.
3. Push the cards into the Pack Feed Slot as far as they will go. The numbered end will extend out of the slot.

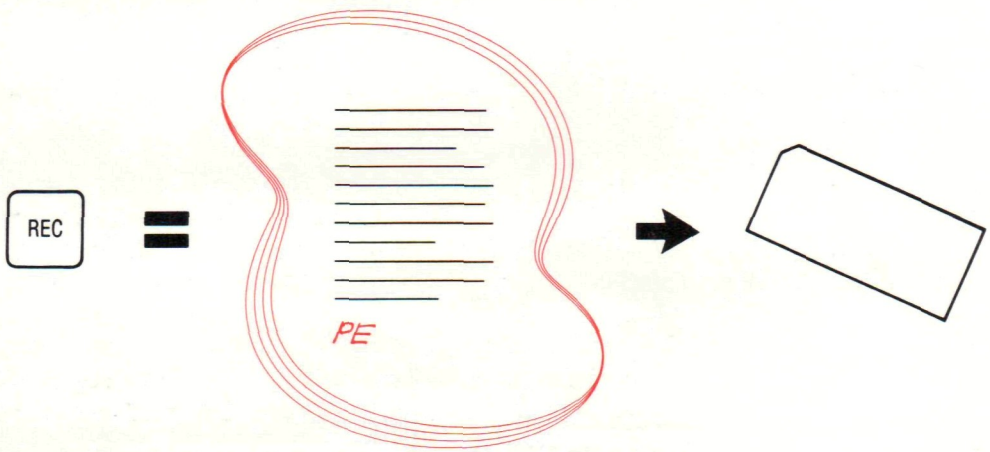
*See page 254 for a more detailed explanation.

The text in memory is recorded by depressing the REC (Record) Button.




When REC is depressed, the typewriter:

- Puts a Page End Instruction (PE) at the end of the text in memory.
- Takes the bottom card from the Pack Feed Slot and inserts it into the Card Unit.
- Records the text up to the Page End Instruction and clears it from memory automatically.
- Drops the recorded card into the Stacker.




To practice typing and recording, go to the next exercise.

## EXERCISE NO. 21

Use the memo below to practice typing and recording.

Follow these steps:

1. Type the memo below exactly as shown. Remember:
   - Begin with an Index Return.
   - Correct errors by backspacing and retyping or by using LINE RET.
2. Type the document code at the end of the memo.
3. Record the exercise.*
4. Leave the recorded card in the Stacker; you will play back the exercise later.

**PRACTICE COPY:**

September 29, 1972

Memo to: R. L. Schaeffer
Office Manager

From: Joseph C. Newman

Subject: Lions Club Finance Committee Meeting

The Lions Club Finance Committee, of which I am chairman, will meet in our building May 29 from 9:00 a.m. to 2:30 p.m.

The regular conference room is going to be used that day for another meeting. Would it be all right if we met in one of the local training rooms? There probably will be 20 people at the meeting. In setting up the room, we will need writing paper and pencils for each person plus one of the portable blackboards.

One further request. Each of the guests would like to park his car in our parking lot for about two hours. Please send me 20 visitor's lot permits to mail out prior to the meeting.

Almost all of these men will be seeing our new building for the first time. I think most of them will want to take a quick tour while they are here.

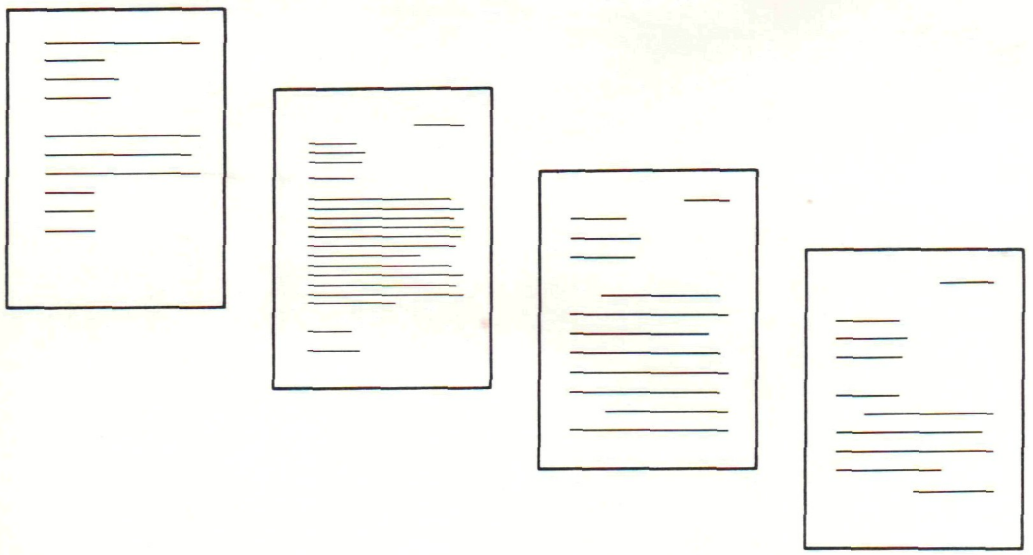
Thanks, Ray. I know you will take care of everything in your usual efficient manner.

bmh1/1

*Normally, you would proofread the typed copy for errors, make the changes and then record. Since you have not learned how to make this type of correction yet, assume the copy is correct.

You have just typed and recorded a single memo.

When you have several projects to do, you will get them finished faster by "batching." This means typing and recording several letters or projects one after another and then playing them back later.



To batch type and record:

- Type one document and record it.
- Leave the recorded card in the Stacker.
- Type and record the next document.
- Continue in this manner until all projects have been recorded. The cards will be stacked in the Stacker.

The IBM Mag Card II allows you to overlap typing and recording. This means that as soon as you depress REC to record the text in memory, you can begin typing the next project.

## EXERCISE NO. 21
Continued.

Use the following copy to practice batch recording.

Follow these steps:

1. Type the first document; then record it on a magnetic card.
2. Type and record the next two documents.
3. Leave the recorded cards in the Stacker; you will play back later.

### PRACTICE COPY:

BULLETIN

Student Job Interviews

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly.

| STUDENT | TIME | COMPANY--INTERVIEWER |
|---|---|---|
| Robert Carlson | 1:45 | Slowing Airline--E. Jones |
| Joe Haley, Jr. | 2:00 | Ace Liability Finance--B. Ace |
| Francis Hill | 2:15 | Mill Electronics--C. Scott |
| Peter Redick | 3:00 | Atherton Machine--J. Bailey |
| Linda Stahl | 3:15 | Graham Telephone--L. Grady |

All interviews will be in the Student Union Building--second floor ballroom. Copies of your transcripts must be presented at the time of the interview.

bmh1/2

September 15, 1972

Mr. J. B. Cary
285 Main Street
Denver, Colorado 80217

Dear Mr. Cary:

The annual sales meeting will be held on September 26, 27, and 28. A copy of the agenda for the conference is enclosed. Please study the program carefully and come prepared to participate in the discussions and activities.

The company will reimburse you for all necessary living expenses incurred during the period September 26-28, up to the limits of the per diem allowance of $25. Your room arrangements have been made at the Hotel Edison, 1400 Congress Boulevard, New York; the daily rate will be $15.

Very truly yours,

E. J. Johnson
Vice President

bmh1/3

September 25, 1972

To: Robert N. Peterson
Project Engineer

Subject: Contract No. 167-345 - Houston Apartments

The contract and performance bond S-486-32 covering this project are enclosed. We will send a copy to Washington, D. C.

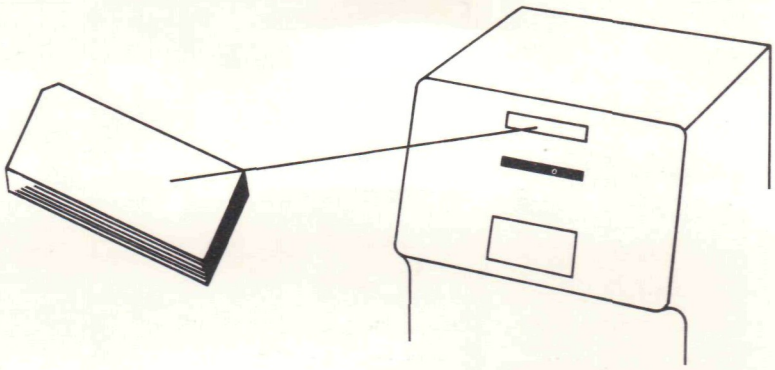
You will be happy to know that we expect to complete this job prior to the date required by the Terms and Specifications of the contract unless we are delayed by adverse weather conditions.

William R. Lee
Site Supervisor

bmh1/4

Enclosures 2

Batching playback is also faster and more efficient. To play back in this way, the recorded cards are placed in the Pack Feed Slot.

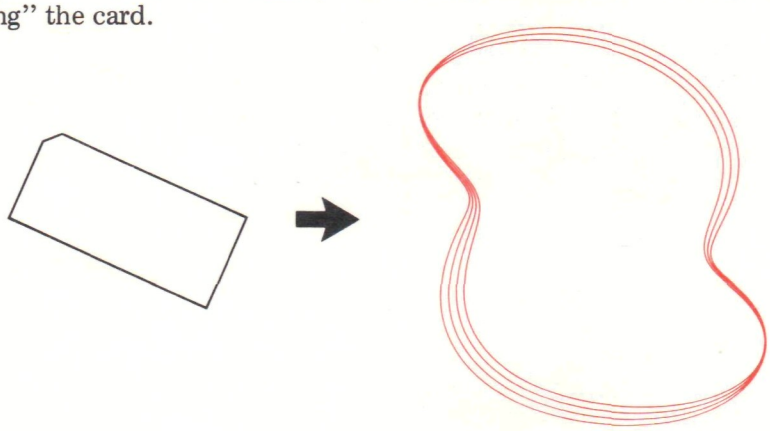


Take the cards from the Pack Feed Slot and place them in the card tray on top of the unit. Take the recorded cards from the Stacker and place them in the Pack Feed Slot.

NOTE:
The cards in the Stacker are in the sequence they were recorded. The first memo you typed is recorded on the bottom card; the last memo is recorded on the top card.

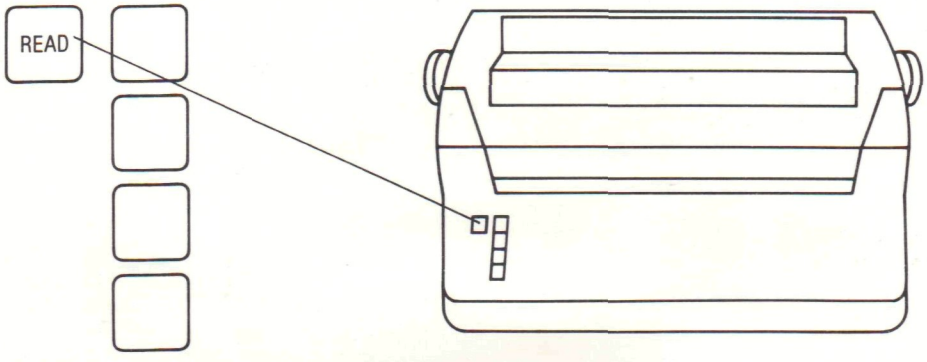
---

To play back the first document, the text is put back into memory by "reading" the card.



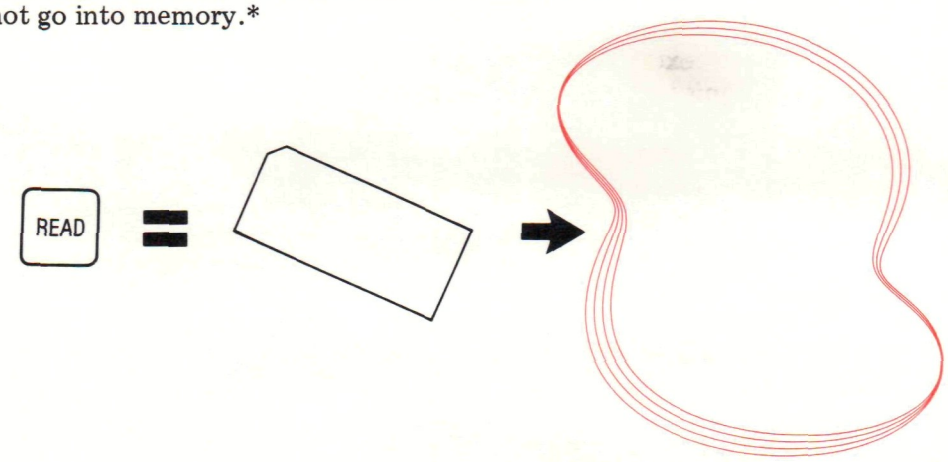
---

A card in the Pack Feed Slot is read by depressing the READ Button.




As soon as READ is depressed, you can depress AUTO to begin playback. The machine allows you to overlap reading and playback.

When READ is depressed, the bottom card is inserted and read automatically. However, the Page End Instruction on the card does not go into memory.*

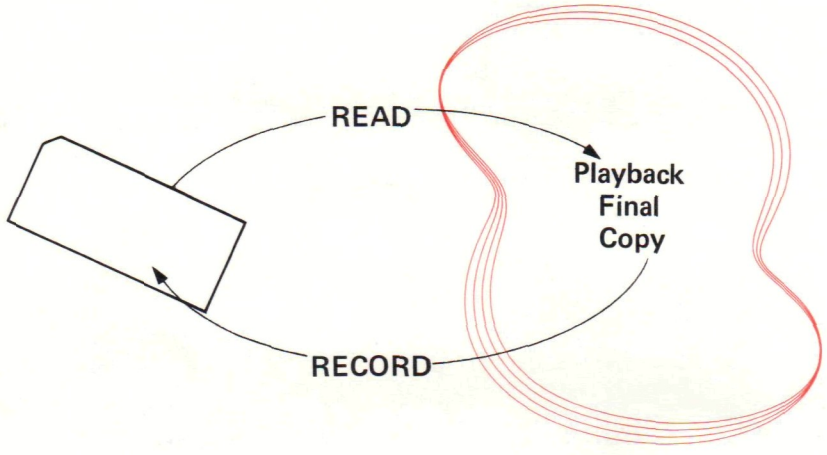



Reading does not change or erase the text from the card; it stays exactly the same.

---

You will notice that the card does not come out when reading is complete; instead, it stays inside the Card Unit.

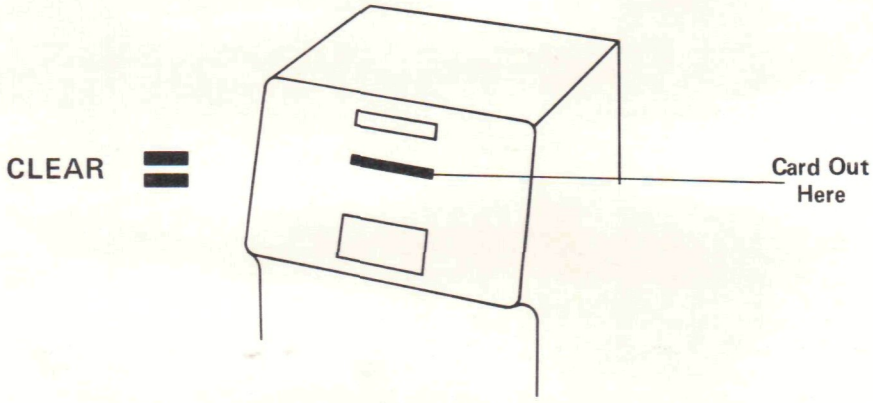
Since playback rearranges the lines, it is necessary to create a "new" card after playback—a card which matches the typewritten copy. Thus, the card read into memory stays inside the Card Unit until playback is complete and you are ready to record the final copy.




*The Page End Instruction does not go into memory because the TPWR Button is up. When TPWR is down, the Page End Instruction does go into memory. The logic associated with reading text into memory with TPWR up and down is explained on page 266. However, you do not need to understand all of this logic at this point.

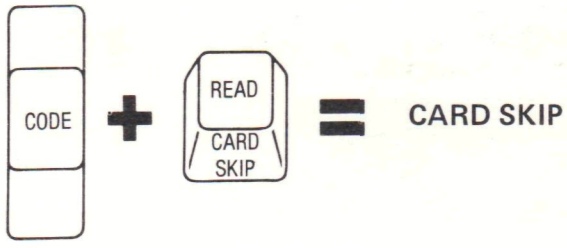
If you wish to remove the card from the Card Unit without recording the material in memory, you may do so. One way is to type a Clear Instruction.

Typing a Clear Instruction clears the text from memory and also causes the card which is inside the unit to eject through the Single Card Slot.



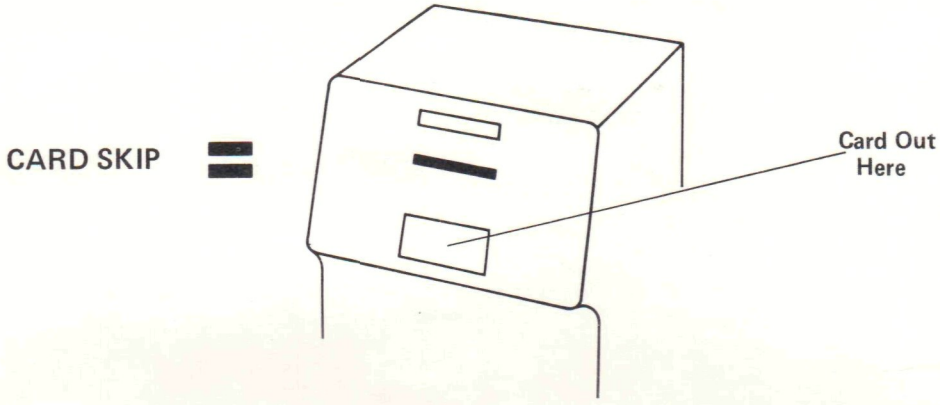

---

Another way to get the card out is to use the Card Skip Instruction. To Card Skip, hold the CODE Button and depress READ.




---

When you Card Skip, the card inside the unit is ejected into the Stacker. The text in memory is not affected.



## EXERCISE NO. 22

Use the cards just recorded to practice batch playback.

Follow these steps:

1. Insert paper. Roll the paper to where the first line is to print.
2. Depress READ*; then depress AUTO to begin playback.
3. When playback of the first memo is complete, depress REC. The recorded card ejects into the Stacker.
4. Repeat steps 1-3 to play back the other documents. Play back each project on a separate sheet of paper.
5. Remove the cards from the Stacker. Place them behind the appropriate day tab in your file box.
6. If any of your projects did not play back as you expected, check the marked copy on the following pages to be sure you used special instructions where they were required. Do not worry about making corrections if you forgot one of the special instructions. You will learn how to do this later.

**NOTE:**
While doing this exercise if you forget to depress REC and instead depress READ, the card inside the unit will eject through the Single Card Slot with the Green Light blinking. (This card is the original for the letter you just played back.)

To continue with the exercise, follow these steps:

1. Remove the ejected card from the Single Card Slot and hold. (The next card will be fed and read automatically.)
2. When reading of the next card is complete, clear memory. Once again a card will come out of the Single Card Slot.
3. Remove the ejected card and place it on top of the card you are holding.
4. Insert both cards on the bottom of the stack in the Pack Feed Slot.
5. Depress READ and resume playback of the letters.

*If the card does not read, remove the stack of cards from the Pack Feed Slot, tap the unnumbered end, replace in the slot, and then depress READ again.

IR

September 29, 1972

Memo to: R. L. Schaeffer
Office Manager

From: Joseph C. Newman

Subject: Lions Club Finance Committee Meeting

Required Spaces

The Lions Club Finance Committee, of which I am chairman, will meet in our building May 29 from 9:00 a.m. to 2:30 p.m.

The regular conference room is going to be used that day for another meeting. Would it be all right if we met in one of the local training rooms? There probably will be 20 people at the meeting. In setting up the room, we will need writing paper and pencils for each person plus one of the portable blackboards.

One further request. Each of the guests would like to park his car in our parking lot for about two hours. Please send me 20 visitor's lot permits to mail out prior to the meeting.

Almost all of these men will be seeing our new building for the first time. I think most of them will want to take a quick tour while they are here.

Thanks, Ray. I know you will take care of everything in your usual efficient manner.

bmh1/1 2CR

IR

Center Instruction → BULLETIN

Required Spaces

Student Job Interviews {WU

Required Space

The following schedule lists each student to be interviewed the afternoon of October 25. Check to be sure that the interviewer with whom you are scheduled is the one you requested. If you will not be able to meet at the time specified, please notify the Placement Office promptly.

DEPRESS NO ZONE S

Required Hyphens

| STUDENT {WU | TIME {WU | COMPANY--INTERVIEWER {WU |
|---|---|---|
| Robert Carlson | 1:45 | Slowing Airline--E. Jones |
| Joe Haley, Jr. | 2:00 | Ace Liability Finance--B. Ace |
| Francis Hill | 2:15 | Mill Electronics--C. Scott |
| Peter Redick | 3:00 | Atherton Machine--J. Bailey |
| Linda Stahl | 3:15 | Graham Telephone--L. Grady |

Required Hyphens

RELEASE NO ZONE S

Required Hyphens

All interviews will be in the Student Union Building--second floor ballroom. Copies of your transcripts must be presented at the time of the interview.

bmh1/2 2CR

IR

September 15, 1972

Mr. J. B. Cary RCR
285 Main Street RCR
Denver, Colorado 80217

Dear Mr. Cary:

Required Space

The annual sales meeting will be held on September 26, 27, and 28. A copy of the agenda for the conference is enclosed. Please study the program carefully and come prepared to participate in the discussions and activities.

Required Hyphen

The company will reimburse you for all necessary living expenses incurred during the period September 26-28, up to the limits of the per diem allowance of $25. Your room arrangements have been made at the Hotel Edison, 1400 Congress Boulevard, New York; the daily rate will be $15.

Very truly yours,

E. J. Johnson RCR
Vice President 2CR

bmh1/3

IR

September 25, 1972

To: Robert N. Peterson
Project Engineer

Required Hyphens

Subject: Contract No. 167-345 - Houston Apartments

Required Hyphens Required Space

The contract and performance bond S-486-32 covering this project are enclosed. We will send a copy to Washington, D. C.

wu wu wu wu wu wu

You will be happy to know that we expect to complete this job prior to the date required by the Terms and Specifications of the contract unless we are delayed by adverse weather conditions.

William R. Lee RCR
Site Supervisor

bmh1/4

Enclosures 2 2CR

## YOU HAVE NOW LEARNED:

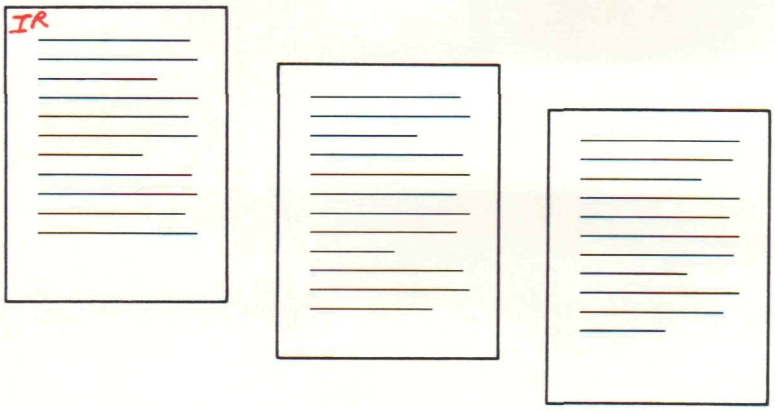
- To save everything you type by recording the text on a magnetic card.
- That text in memory is recorded by depressing the REC (Record) Button.
- That when REC is depressed the machine:
  - Puts a Page End Instruction in the memory.
  - Takes a card from the Pack Feed Slot.
  - Records the text; deletes the text from memory.
  - Drops the recorded card into the Stacker.
- To batch record several projects is a more efficient way to get your work done.
- To batch playback.
- To read the text back into memory.
- That a card is read from the Pack Feed Slot by depressing READ.
- That the card stays inside the Card Unit until you are ready to rerecord the text after playback.
- To overlap recording and typing.
- To overlap reading and playback.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

## MULTIPLE-PAGE PROJECTS

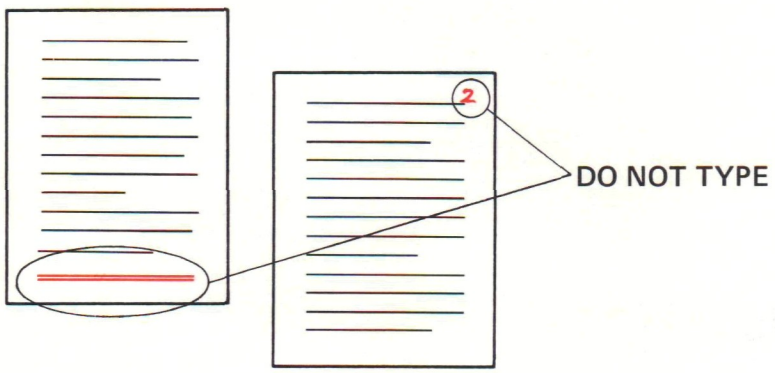
Many of your projects will be longer than one page. The fastest way to get a multiple-page project done is to type and record the complete document and play it back later.

Begin the project with an Index Return only on the first page.




---

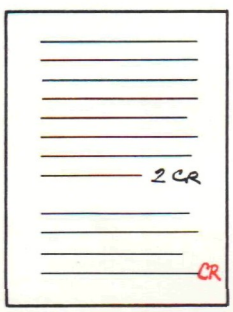
Do not type footnotes or page numbers. These will be typed on the final copy.




Type until you reach the bottom of the paper; then record that page.

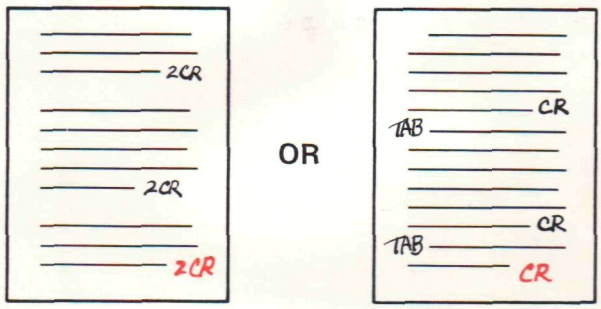
---

If the page ends in the middle of a paragraph,




end the last line with a carrier return; record the page.

When the page ends between paragraphs, type the same number of carrier returns that separate the other paragraphs.




---

At all times, take advantage of the memory and what it does for you:

- The IBM Mag Card II makes line-ending decisions during playback. When typing, don't worry about having an even right margin.
- Immediate errors are easily corrected by backspacing. Correction of proofreading errors will be covered later.
- Page-ending decisions are made during playback. Type until you reach the end of the paper; then record. Insert new paper and continue typing.
- Recorded cards stack in sequence. Let the cards stack until the project is complete.

## EXERCISE NO. 23A

Use the copy following to practice typing a multiple-page project.

Follow these steps:

1. Insert cards for recording in the Pack Feed Slot.
2. Set the typewriter for double line spacing.
3. Type the exercise, recording at the end of each page. You will find the practice copy on the next three pages.

## INTERPLAY OF DOMESTIC SEGMENTS

It now remains for us to consider the interplay of the economic activities of the three domestic segments of our economy: consumers, business investors, and government, which--together with our country's foreign trade--helps to determine our economic growth. Examples will aid in illustrating this interplay.

### The Consumer

Let's begin with an example from the point of view of the consumer. Suppose your sister Gertrude and her husband, Walter Rommel, decide to move their family from a row house in a city to a new house in the suburbs a few miles away. Only one family and its purchases are concerned. But if hundreds or if thousands of families throughout the country were to decide to make the same sort of move over the course of the year, a chain reaction would be set off in our free enterprise system and would be reflected in our gross national product.

In the first place, the demand for suburban houses would go up and that for row houses would go down. Banks would lend money to the new owners to finance their purchases of new homes. These new owners would become potential buyers ordinarily through retail stores--of such final goods as household furniture, garden furniture, lawn mowers, sandboxes, wading pools, fencing, and the like.

To keep on hand stocks of such products, the retailer would order in greater quantity from the wholesaler who in turn would order in greater quantity from the manufacturer. The manufacturer would find need for a greater supply of raw materials and probably for new equipment.

Patently there would be need for more architects, carpenters, brick layers, truck drivers, and assembly line workers for the new equipment. There would be need for more stores to supply the needs of new home owners and with these stores would come a contingent of new clerks. There would be need for telephone linemen and bus drivers and garage mechanics and so on and so on.

And what has all this to do with our American economy? It illustrates that consumer trends in purchasing help to determine the economic trends of our country.

But what determines whether the consumer will buy? What determined whether you and John would buy a car four years ago? It was your decision to make your down payment on the house that kept you out of the car market at that time. Suppose every one in your vicinity had determined on your line of action. How long could your town have kept its car sales companies in business? And suppose every one in your vicinity had determined as you did to build a new home. What an upsurge of activity there would have been in the construction industry. Of course, such suppositions <u>are</u> suppositions, for families do not get together and plan such a line of procedure.

However, let's take an actual example of the impact which a trend in consumer buying <u>can</u> have on our business output. The decision of the American consumer to acquire television sets placed in motion a series of actions.

In 1950, out of 42 million households only 5 million had acquired television sets. Here was a jump from 12 percent of all households to 92 percent of all households who had purchased television sets. The number of television stations increased from 107 in 1950 to 583 in 1965, an increase of over 545 percent. Revenue jumped from $106 million in 1950 to almost $1.8 billion in 1964, an increase of over 1,700 percent. Here was growth indeed. All along the line, new jobs and services and final goods came into being. As

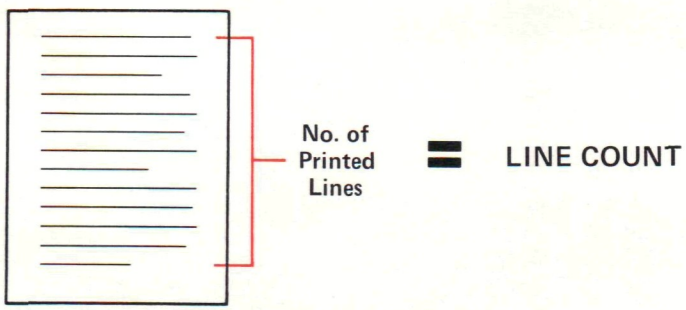
a result, the gross national product, as far as this consumer buying trend was concerned, grew proportionately.

The action of consumers then has a direct bearing on the economic growth of our country. If the consumer--and that means each of us--is willing and able to spend more because he is confident that his job and income will continue and because he is attracted by the appeal of certain products, he contributes to the growth of the GNP. So much for the consumer.

## Playing Back a Multiple-Page Project

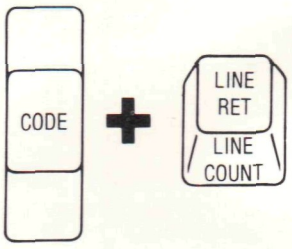
Because line endings change during playback, page endings will change also.

With the IBM Mag Card II you do not have to watch playback closely to manually stop at the end of a page. By typing a Line Count Instruction before you play back, you can tell the typewriter how many lines are to print on a page. Playback will stop automatically when this number of lines has printed.



The Line Count Instruction has two parts:

The instruction,




and a two-digit number through 95.*

27 **(any two-digit number)**

After typing the number, the carrier will return automatically. This indicates that the line count has been stored in the typewriter.

The line count stays the same until you enter a new one or turn the typewriter off. When line count is set at zero, the typewriter will play back to the end of the text in memory.

To set line count:

1. Depress TPWR.
2. Hold the CODE Button and depress LINE RET.
3. Release the CODE Button and type a two-digit number. (To play back double-spaced copy type 27; type 54 for single-spaced copy.)
4. Release TPWR.

Use the steps above to type a line count of 27.

*Since this number will print, always type the Line Count Instruction before inserting the paper for playback.

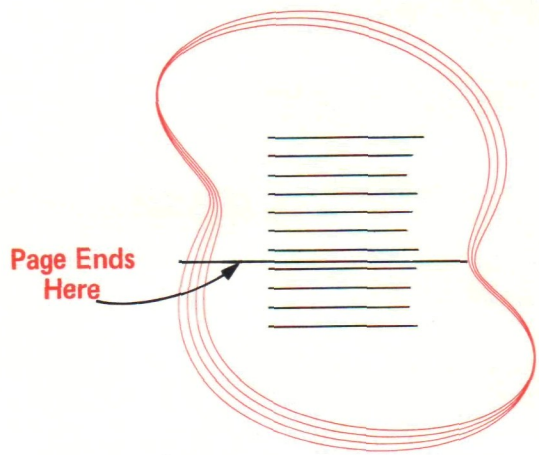
## EXERCISE NO. 23B

Follow these steps to play back the exercise:

1. Take the recorded cards from the Stacker and place them in the Pack Feed Slot.
2. Insert paper; position the paper where the first line is to print (one inch from the top edge).
3. Depress READ; then depress AUTO to start playback.
4. If playback stops for hyphenation, make the line-ending decisions and continue playback.
5. When playback stops at the end of the page (when line count is reached), continue reading the instructions below.

---

Because line endings change during playback, the end of the playback page may not be the end of the text in memory. Thus, the end of the page must be marked in memory.

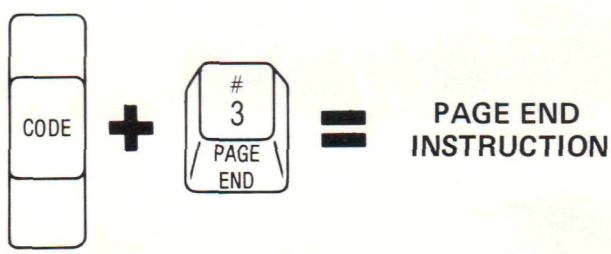



The Page End Instruction does this.

---

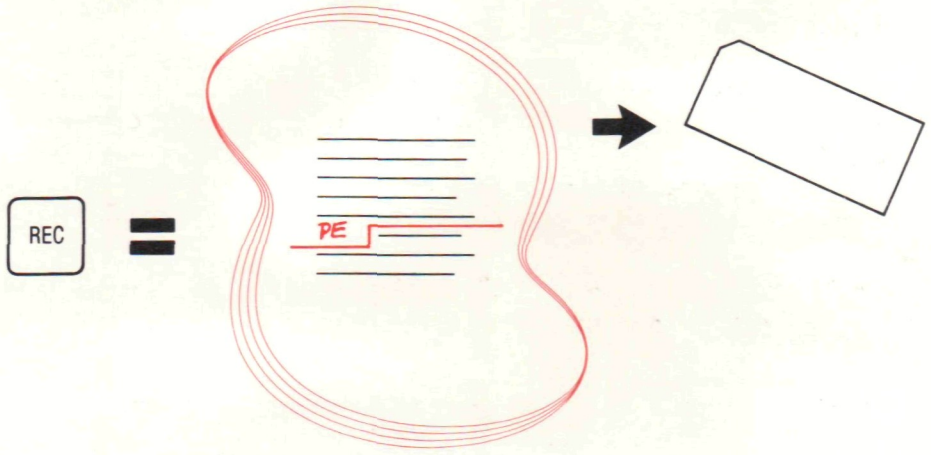
Up to now, the Page End Instruction has been automatically inserted at the end of the text when you depressed REC. Now, however, the end of the page is not the end of the text; the Page End Instruction must be typed.

A Page End Instruction is typed by holding the CODE Button and typing a "3".




Type a Page End Instruction (code "3").

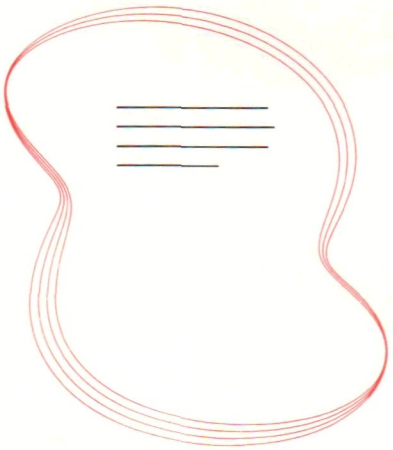
When REC is depressed, only the text through the Page End Instruction is recorded and deleted from memory.



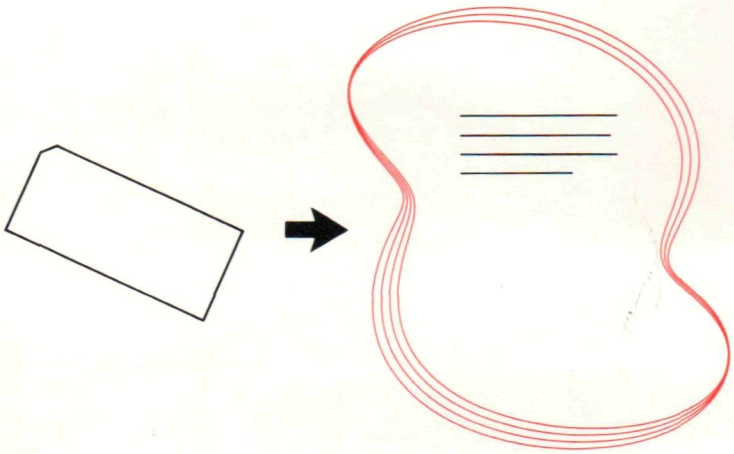

The typewriter does not put a Page End Instruction at the end of text when it sees there already is one in memory.

Depress REC.

The text remaining in memory is played back as the beginning of the next page.



To continue the project, read the next card into memory.



## EXERCISE NO. 23B

Continued.

Follow these steps to complete playback:

1. Insert paper and depress AUTO to continue playback.
2. While the text is playing back, read the next card.
3. When line count is reached:
   - Type a Page End Instruction (code "3").
   - Depress REC.
4. Repeat steps 1 - 3 to play back the remaining text.
5. Place the recorded cards in a folder (first page on the bottom) and file them in your card box for later use. Write the exercise number on the folder.
6. Save the final copy for use later.

YOU HAVE NOW LEARNED:

- To type a multiple-page project:
  - Begin the first page with an Index Return.
  - Do not type footnotes or page numbers.
  - Type and record one page at a time.

- To control playback page length, type a Line Count Instruction (code LINE RET + a number).

- To mark the end of a page in memory, type a Page End Instruction (PE).

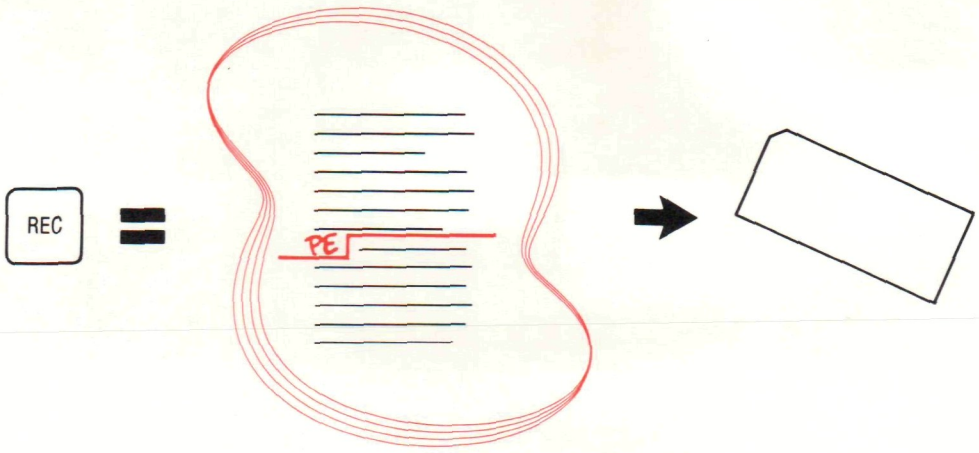
- To type a Page End Instruction, hold the CODE Button and type a "3".

- When REC is depressed, the typewriter records through the Page End Instruction (PE), and clears this text from memory.

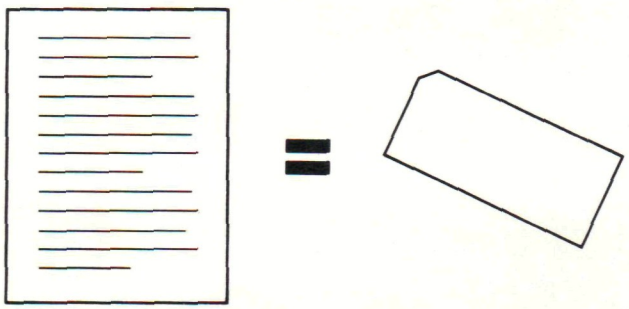
- To play back a multiple-page project:
  - Place the recorded cards into the Pack Feed Slot.
  - Type a line count.
  - Read the first page into memory.
  - Play back the final page.
  - Type a Page End Instruction.
  - Record the final page.
  - Read more text into memory.

**GO TO THE NEXT SECTION ONLY WHEN YOU ARE SURE OF THIS MATERIAL.**

As you have learned the typewriter records through the Page End Instruction in memory when REC is depressed. Thus, one recorded card represents one page of typed copy.

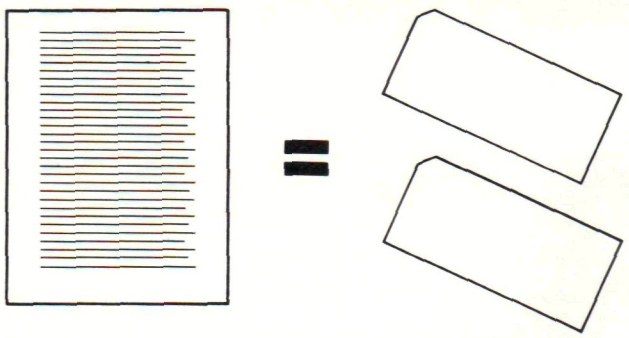



Most typewritten pages will fit on one card.

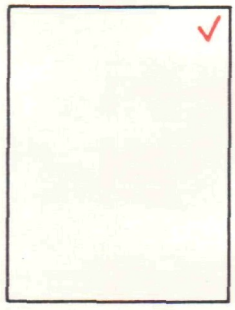


However, if you are recording a page of single-spaced copy, a card may be filled before the complete page of text is recorded.

When this happens, and you are recording text for the first time, a second card is fed automatically from the Pack Feed Slot. Thus, the page is recorded on two cards.



To easily identify pages which are recorded on two cards, place a check mark on the typewritten copy.




= 2–CARD PAGE

---

## EXERCISE NO. 24A

Use the copy on the next page to practice a two-card page.

Follow these steps:

1. Place some cards for recording in the Pack Feed Slot.
2. Set the typewriter for single line spacing.
3. Type the first page of the exercise exactly as shown. (The practice copy is on the next two pages.)
4. Record the page. Notice that this page is recorded on two cards. (Leave the cards in the Stacker.)
5. Place a check (✓) on the typed copy.
6. Type and record the remaining page.

MEASUREMENT--KNOWLEDGE--CONTROL

To a businessman or a factory manager, good measurements and standards help assure that he knows what he is doing. On the other hand, inadequate measurements and standards can leave him unprepared for wise business decisions, a disadvantage in the marketplace. There are ways to cope with inadequate measurement capabilities, but they are costly in terms of time, money, and manpower. For example, there is increasing use in industry of radiation. These new uses include: processing of plastics, vulcanization of rubber, sterilization of pharmaceuticals, inspection of metal castings, preservation of food, etc. In all of these cases, the amount of radiation must be measured and controlled, or else it will not perform that task expected of it. Furthermore, the use of radiation involves considerations of human safety for both those who employ the new machines and processes, and those who receive the product or service which has involved radiation. In the absence of sufficiently accurate measurement data, the only alternative is to overdo the amount of protection built in to radiation installations. This is costly, and may be unnecessary, but there is no other choice if the state of measurement science is not far enough advanced to yield reliable data adequate to our needs.

Typically, the most stringent demands made upon our measurement system have come out of the nation's space exploration and national defense programs. In these fields, the limiting factor in what is accomplished is generally the state of the art in the particular field of science or technology. In other words, money considerations are less important than the question: Can the job be done? In the regular economy, however, the overriding consideration is whether a product or service can be successfully sold to the public. This consideration involves questions of marketing, distribution, design, availability of raw materials and components, production capacity, national trends in personal income, etc. The determining factor in the successful introduction of a new product or service is more likely to be a combination of business and economic considerations rather than the resolution of a problem in physical measurement.

To illustrate the point about the military and space programs, here are some examples of measurement problems for which there was no satisfactory solution until the state of the measurement sciences had moved forward.

In a certain type of missile-launching complex, one control center sends radio signals to activate several missiles, hidden in underground silos several miles away. The antennas used to send the signals are buried underground, to protect the system from enemy attack. However, the missiles will not be triggered if the signal is not strong enough. Because the performance of the antennas couldn't be measured accurately enough, engineers were forced to overdesign them, with a cost increase running into millions of dollars.

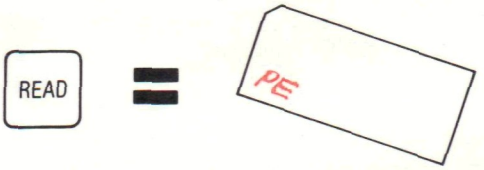
A rocket engine manufacturer knew that with his current ability to measure the thrust of the engines, he would have to schedule a specified number of test firings in order to assure himself of the reliability of the rocket engine. If he could improve his accuracy in measuring the thrust of the engines, he could greatly reduce the number of test firings and still achieve the same reliability. Since one test firing alone costs millions of dollars, there were great sums of money, as well as valuable time, being wasted.

A manufacturer was producing sophisticated instrumentation units at a cost of about $25,000 each. In order to obtain one good unit which would meet the specifications, however, he had to produce three units, because he was unable to measure hole sizes accurately enough.

Fortunately, the nation's measurement system has made great strides in recent years, and these particular problems are no longer with us. But as long as the space and defense programs are operating at the frontiers of science and technology, their measurement problems will lie at the frontiers of the measurement art, a challenge to our finest scientists and engineers.

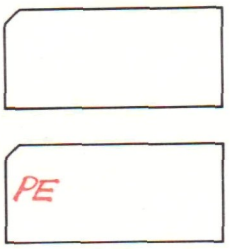
---

To play back, the recorded cards are placed in the Pack Feed Slot. When READ is depressed, the typewriter takes the bottom card and starts reading the text into memory. The typewriter continues to read until it finds a Page End Instruction.



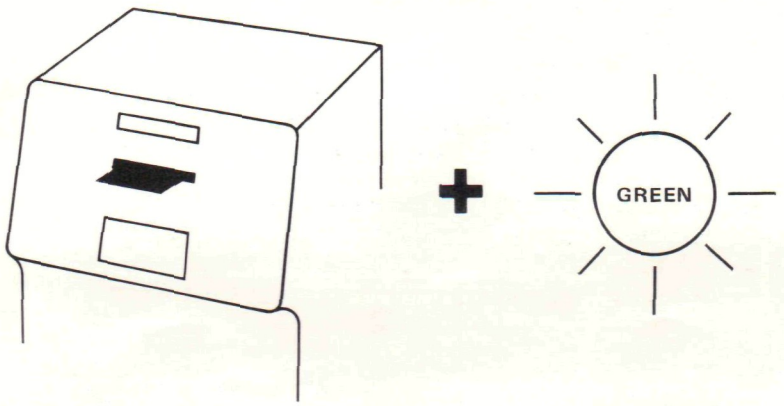

---

When a page is recorded on two cards, the Page End Instruction is on the second card. Thus, reading is not complete until both cards have been read.

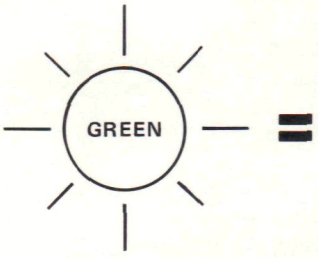



---

Only one card can be inside the Card Unit at a time. Therefore, when the first card has been read, it ejects through the Single Card Slot. This causes the Green Light to blink.



The Green Light blinking indicates that the typewriter has read all the text on the card but has not found a Page End Instruction. In other words, the page is recorded on two cards. Reading cannot continue until the card is removed from the Single Card Slot. The Green Light blinking is your signal to remove the ejected card from the Single Card Slot.




= REMOVE CARD FROM SINGLE CARD SLOT

When the card is removed, the light goes out and the second card is read automatically. This second card stays inside the Card Unit.

The ejected card has not been changed in any way. But, now that the text recorded on it has been read into memory, there is no reason to save the typing on the card. It can be placed in the card tray and reused.

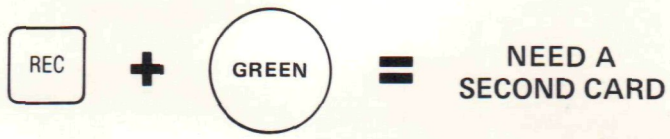
---

## EXERCISE NO. 24B

Follow these steps to play back the last exercise:

1. Remove the cards from the Pack Feed Slot and place them in the card tray.
2. Place the recorded cards in the Pack Feed Slot.
3. Depress TPWR.
4. On draft paper, type a line count of 54 (code LINE RET + 54).
5. Release TPWR.
6. Insert paper; position it where the first line is to print.
7. Depress READ; then AUTO.
8. When the first card has been read it will eject through the Single Card Slot and the Green Light will be blinking.
9. Remove the ejected card and place it in the card tray. As soon as you take the card out of the Single Card Slot, the typewriter begins reading the next card.
10. When line count is reached, type a Page End Instruction (code "3").
11. DO NOT RECORD THE PAGE YET; continue in this book.

When REC is depressed to record the final page, the typewriter records on the card inside the unit. If all the text cannot fit on this card, and a second card is needed to complete recording, the Green Light will come on solid.




Depress REC. Notice that when the card drops into the Stacker, the Green Light is on solid.

---

The Green Light solid indicates that recording is not complete; that a second card must be inserted. It is your signal to insert a card in the Single Card Slot.




Insert a card in the Single Card Slot; recording will continue automatically.

---

To continue with the exercise, follow these steps:

1. Insert paper and continue to play back, read, and record until the document is complete.
2. Take the final cards from the Stacker and place them in the card tray. You do not need to save the typing on these cards; they can be reused.

# Indented Projects





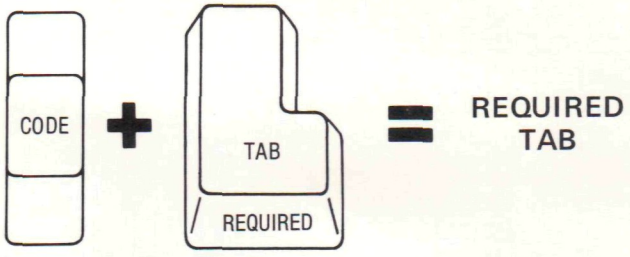
On the IBM Mag Card II, a special instruction is used to type indented projects, such as those shown here.

1. _____ _____ _____
   a. _____ _____ _____
   b. _____ _____ _____
2. _____ _____ _____

---

The Required Tab Instruction is used to establish a temporary left margin for the paragraph you are typing. The temporary left margin is always at a tab stop.

A Required Tab is typed by holding the CODE Button and depressing the tab key.



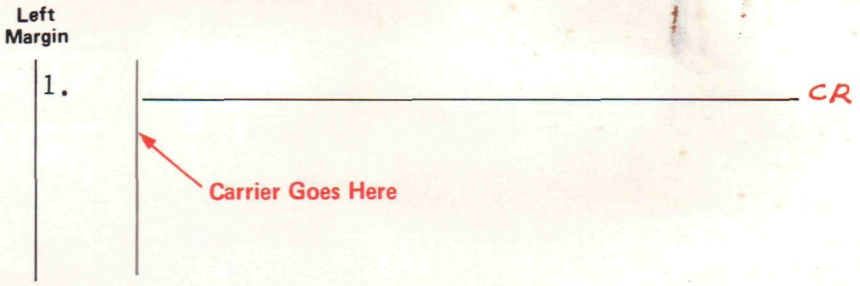

---

The Required Tab Instruction is typed only on the first line of a paragraph.

Left Margin

1. Req. TAB _____

When you carrier return to type the next line, the typewriter "remembers" the number of Required Tabs you typed on the first line and automatically tabs for you.




To see how this works:

- Type a Required Tab (code tab).
- Type this line:

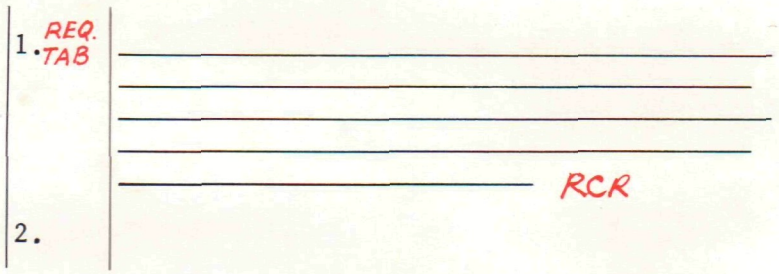
```
When a paragraph is to be indented
```

- Carrier return and watch the typewriter tab to the temporary left margin.

---

At the end of each paragraph, you must cancel the Required Tab Instructions so the carrier will not continue to tab automatically.

A Required Carrier Return cancels the Required Tab Instructions.




To see how this works:

- Type this line:

```
type Required Tabs on the first line.
```

- End with a Required Carrier Return. Notice that the carrier goes back to the left margin.
- Clear memory.

If indented material is typed without Required Tabs, the typed copy will look correct:

1. The Budget Department is at the present time compiling figures for the CR
TAB second half of 1972.

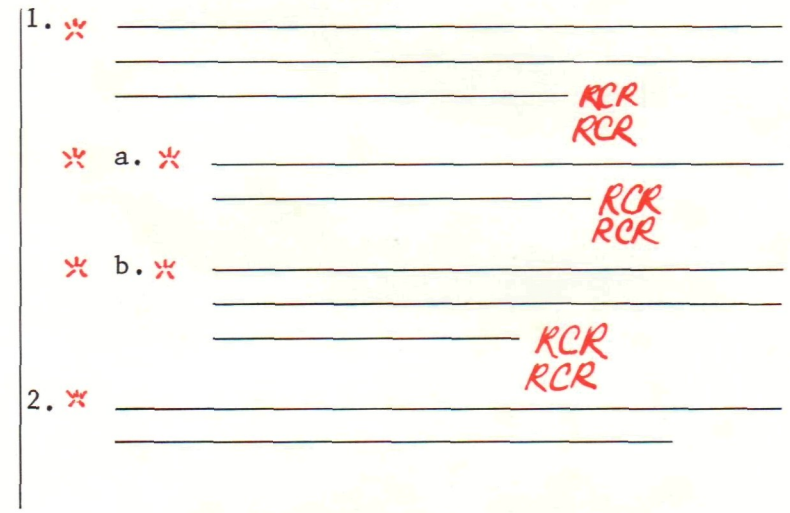
But it may play back like this:

1. The Budget Department is at the present time compiling figures for
the CR
TAB second half of 1972.

This is because a carrier return followed by a tab is always played back as a carrier return.

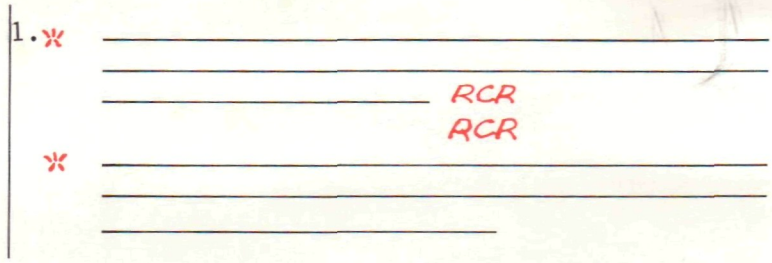
---

When typing indented material, the first line of every paragraph must contain the necessary number of Required Tab Instructions; the last line must end with a Required Carrier Return(s).




* = Required Tab

This is true even when a paragraph uses the same temporary left margin as the one preceding it.



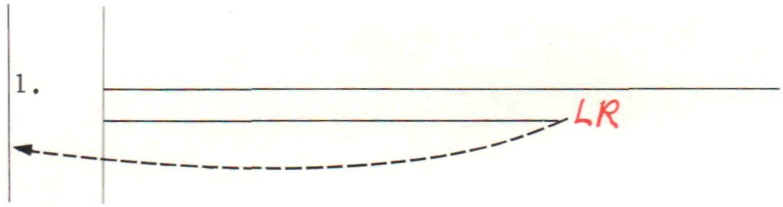

* = Required Tab

When you learn to revise, you will see why you must type indented paragraphs this way.

---

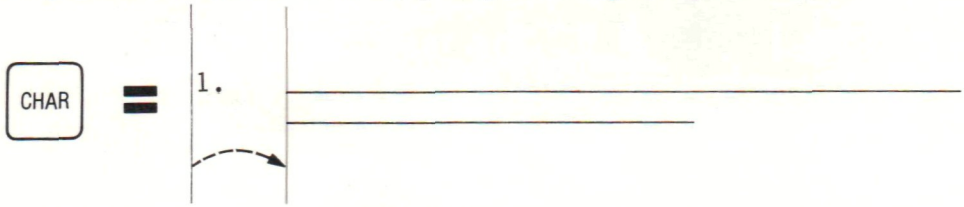
If you make a mistake while typing indented material, use the correction procedures you already know—backspace and retype, or line return to make the correction.

When you depress LINE RET to correct an error on a previous line, the carrier goes to the left margin and stops—it does not automatically return to the temporary left margin.



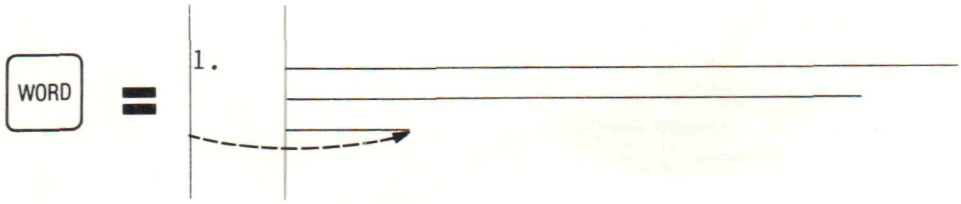

---

To position the carrier at the temporary left margin, depress CHAR.




---

To position the carrier at the temporary left margin and play back the first word in that line, depress WORD.



## EXERCISE NO. 25

Use the copy below to practice typing indented material.

Follow these steps:

1. Type the exercise exactly as shown. Type Required Tabs where the asterisks(*) appear on the copy. End each paragraph with Required Carrier Returns.
2. Type the deliberate errors that are circled and then type to the (√) mark in order to practice using line return to correct the error.
3. Play back final copy.
4. Clear memory.

**PRACTICE COPY:**

IR The costs of change include "social costs" just as the needs we seek to satisfy are becoming more social in nature, so, too, are the costs associated with satisfying such needs more social in nature:

* 1. * To the individual who becomes unemployed as a result of technological change--should he alone haev to pay these costs, or does√society bear some of the responsibility? RCR RCR

* 2. * To a community whose water supply becomes more highly polluted when a new plant begins to produce--who pays these costs? Who should pay? RCR RCR

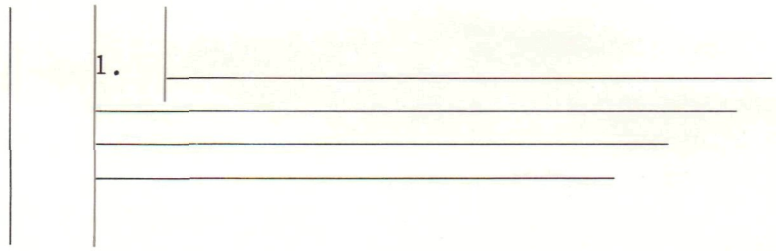
* 3. * To a State or region when large development or production porjects are completed, cancelled, or shifted elsewhere--who pays√these costs? Who should pay? RCR RCR

* * a. * Obviously, the greatest incentive to scientific and technological advance is the expectation of increasing profit. RCR RCR

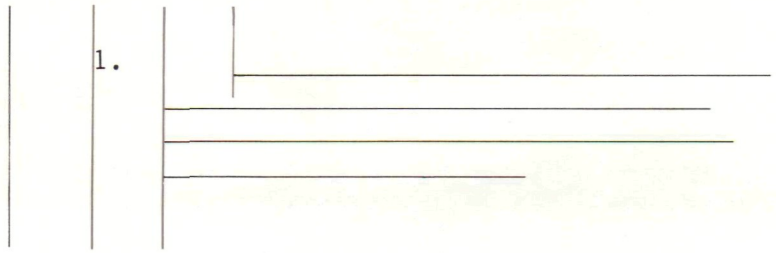
* * b. * The costs of change do not seem nearly as burdensome if counterbalanced bythe prospect or potential of increased sales and√profits. RCR RCR

Sometimes the indented paragraph will be typed with both Required Tabs and regular tabs on the first line.

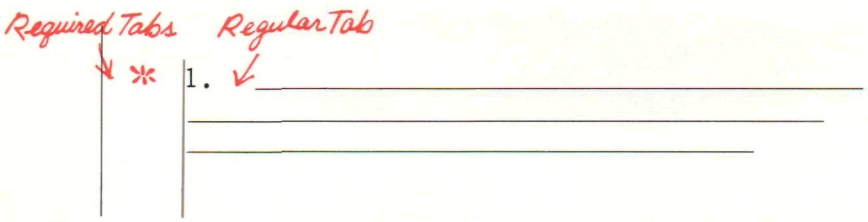
For example, if the copy looks like this:

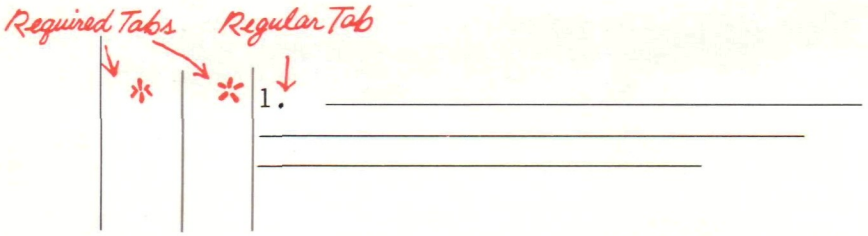



or like this:




type Required Tabs to set up the temporary left margin; type a regular tab for the additional indent on the first line:



## EXERCISE NO. 26

Use the copy below to practice typing both Required Tabs and regular tabs.

Follow these steps:

1. Type the exercise below using Required Tabs to indent the copy and regular tabs between the numbers and the first word of each question.
2. Use the correction methods you have learned for correcting errors detected immediately.
3. Play back final copy.
4. Clear memory.

### PRACTICE COPY:

IR
QUESTIONS

1. How many measurements do you make in a day? List the devices you use or consult in making them. RCR RCR

2. List all of the automatic measuring and control devices in your home. Who is responsible for seeing to it that they work accurately? RCR RCR

3. Why is measurement more important to you than it was to the American farmer at the turn of the century? RCR RCR

4. Explain the statement "measurement is the foundation of modern scientific and industrial progress." RCR RCR

5. Why is it to the manufacturer's advantage to make sure he checks his measurements against the National standards? RCR RCR

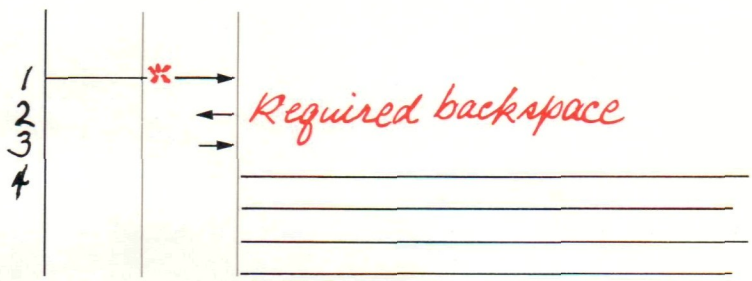
When a tab grid is set in the typewriter, you may type over a tab stop position before you are ready to establish the temporary left margin:

```
BUDGET    The Budget Department is at the present time compiling
          figures for the second half of 1972.  Projections for
          materials, labor and overhead are vague at this time;
          complete figures should be available by year's end.
```

---

To type a paragraph like this:

1. Type the word, and a Required Tab. (In this illustration, the second tab from the left margin stop.)
2. Type a Required Backspace (code backspace) to move the carrier off the tab stop.
3. Type another Required Tab.
4. Type the paragraph.




Use the steps given above to type the illustrated paragraph. Play back a copy; clear memory.

---

## EXERCISE NO. 27

Use the following copy to practice typing indented material on the tab grid.

Follow these steps:

1. Type the exercise. Use Required Tabs to establish a temporary left margin. End paragraphs with Required Carrier Returns.
2. Remember the temporary left margin must be established on the first line of every paragraph.
3. Play back final copy.
4. Clear memory.

**PRACTICE COPY:**

IR

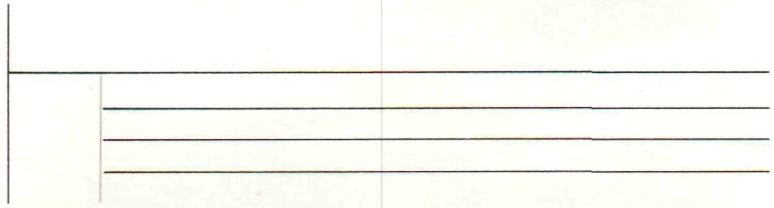
c.1500 Leonardo da Vinci, "the genius of the Renaissance," recognized the importance of observation and experimentation in learning. He used both techniques to make many discoveries, of which 21 can be called major inventions. Few of them were developed and put to use during his lifetime; in fact, most had to be "reinvented" centuries later. RCR RCR

c.1543 Nicolaus Copernicus' theory that the earth and other planets move around the sun laid the background of modern astronomy. Andreas Vesalius published a book on the anatomy of man, based on observation. RCR RCR

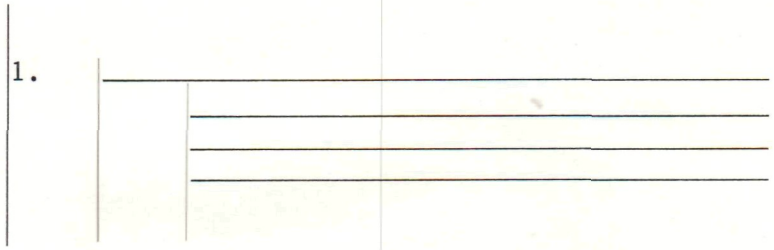
c.1556 Agricola's "De re metallica" was one of the first books helpful to technologists. RCR RCR

---

Most indented text will be like the exercises you have just typed. Occasionally, however, you may see indented copy that looks like this:



or like this:




As you can see, the left margin for the first line of each paragraph is not the same as the left margin of the other lines in the paragraph.

In both situations, you must type enough Required Tabs on the first line to establish the temporary left margin for the second and subsequent lines. At the same time, you must type the first line at its left margin.

To type a paragraph like this:

```
The following report contains the condensed status reports of
     departments that concern your area.  A total report is available
     in the President's office.
```

Follow these steps:

1. Type a Required Tab (code tab).
2. Type enough Required Backspaces to move the carrier back to the left margin—where the first line is to print.
3. Type the first line and carrier return. The typewriter will "remember" the Required Tab and automatically tab to the temporary left margin.
4. End the paragraph with a Required Carrier Return (code carrier return).




Use the steps given above to type the illustration.
Play back, then clear memory.

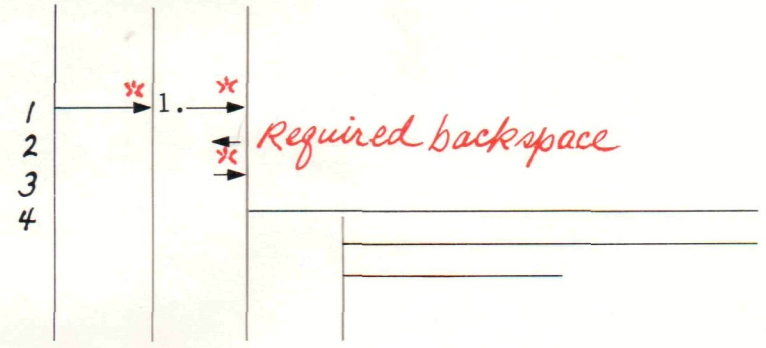
---

To type a paragraph like this:

```
     1.   Purpose of the annual meeting--To elect a Board of
               Directors for a one-year term of office, such
               term to begin on July 1, 1973.
```

Follow these steps:

1. Type a Required Tab; the "1.", and another Required Tab.
2. Type one Required Backspace.
3. Type another Required Tab.
4. Type the line. When you carrier return, the typewriter will automatically tab to the third tab position.



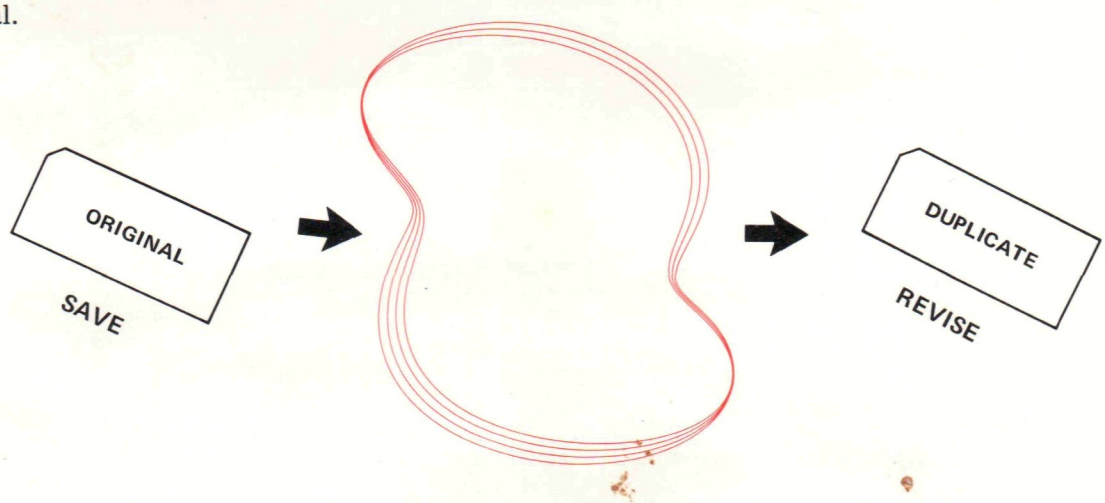

Use the steps given above to type the illustration.
Play back; clear memory.

# Card Duplication



There may be times when you will want to create a duplicate set of cards.

For example, the packet of cards in the back of this book contains prerecorded exercises. These cards should be maintained with the instruction manual; therefore, you will create a duplicate set for your own use in learning how to revise and update prerecorded material.

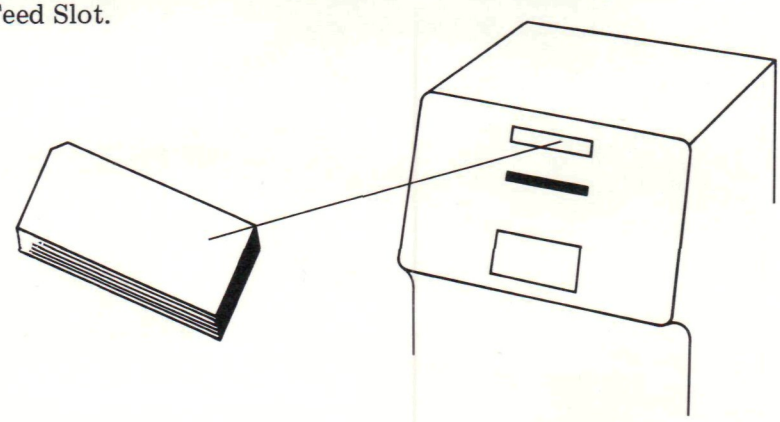



Take the exercise cards from the back of the manual.

Arrange the cards so that No. 1 is on the top and No. 10 is on the bottom. Place the stack in the card tray on top of the Card Unit.

---

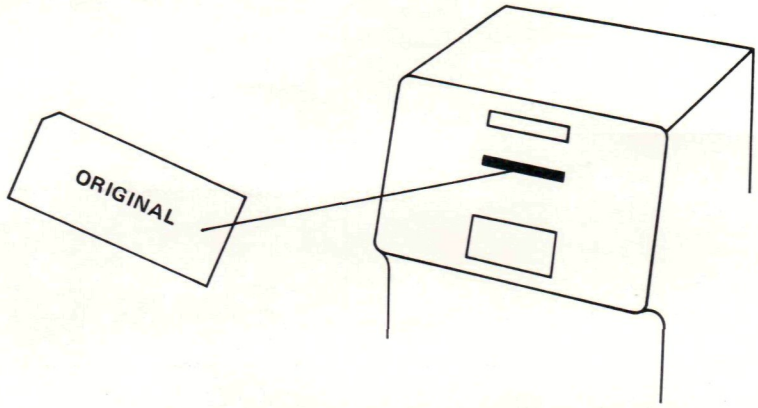
To make a second set of cards, place cards for recording in the Pack Feed Slot.



Load the Pack Feed Slot.

The original card is read into memory by inserting it in the Single Card Slot.

Unless the Green Light is on solid, the typewriter always "reads" a card when it is inserted in the Single Card Slot.

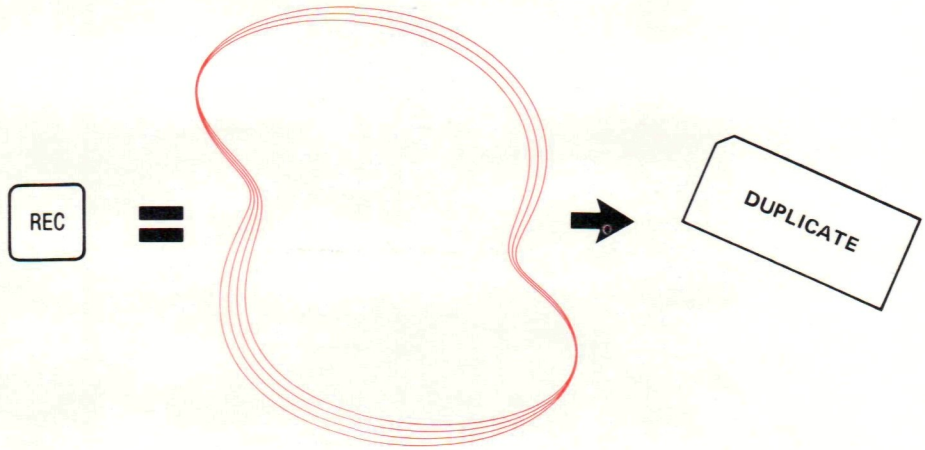



Take Card No. 1 from the card tray and read it into memory. When the card ejects, take it from the Single Card Slot and place it face down in the other side of the card tray.

---

The duplicate card is created by depressing REC. A card is fed from the Pack Feed Slot and the text is recorded and cleared from memory.

The duplicate card drops into the Stacker.



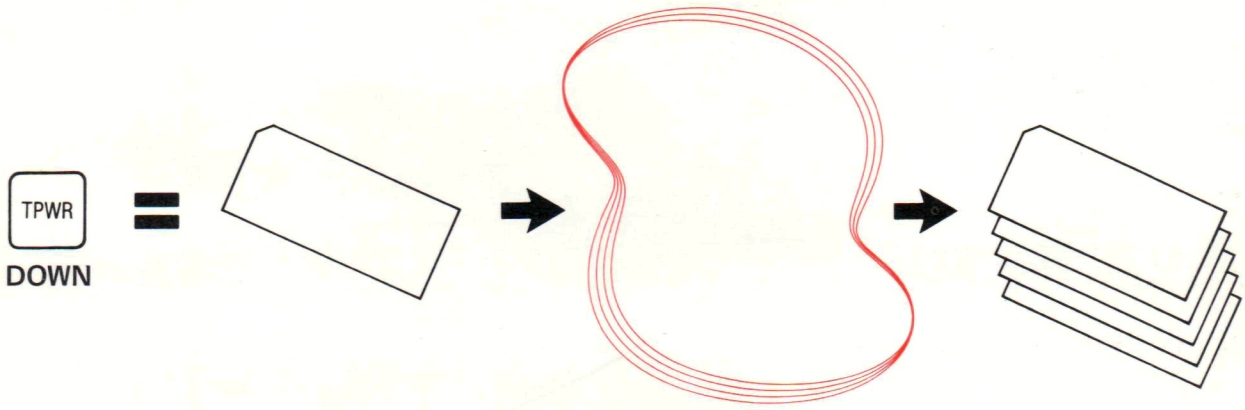

Depress REC. Leave the duplicate card in the Stacker.

Follow these steps to duplicate the remaining exercise cards:

1. Read one page into memory (insert card into Single Card Slot).
2. Remove the ejected card and place it in the card tray.
3. Depress REC.*
4. When all the exercise cards have been duplicated, place the original cards back in the folder.
5. Take the duplicate cards from the Stacker and place these cards in the card tray; you will use them soon.

---

If you want to make more than one copy of a card, the TPWR Button is locked down.




When TPWR is down, recording a card does not delete the text from memory. Thus, you can read a page into memory, and record as many duplicates as required. When you are ready to read the next page into memory, manually clear the memory by typing a Clear Instruction.

---

To make more than one copy of a card:

1. Depress TPWR.
2. Read the original card into memory by inserting it in the Single Card Slot.
3. Depress REC. Continue to record the desired number of duplicate cards.
4. Clear the memory before reading the next card.

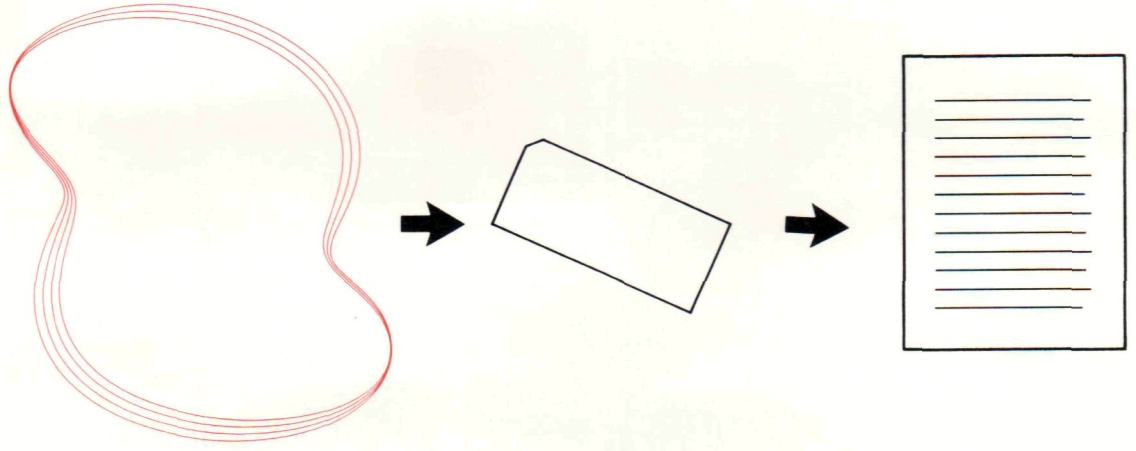
---

*If REC is depressed before the ejected card is removed from the Single Card Slot, nothing will happen. Remove the ejected card and depress REC again.

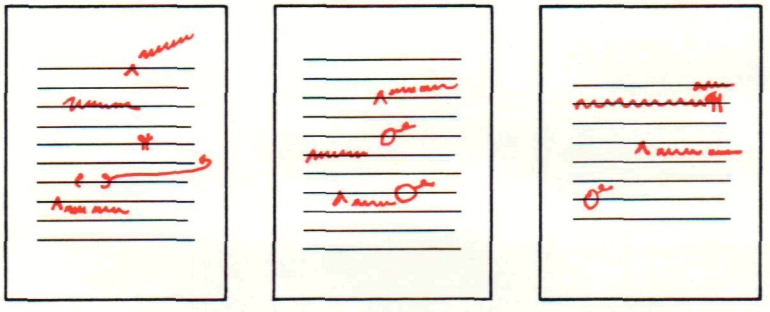
# Revision



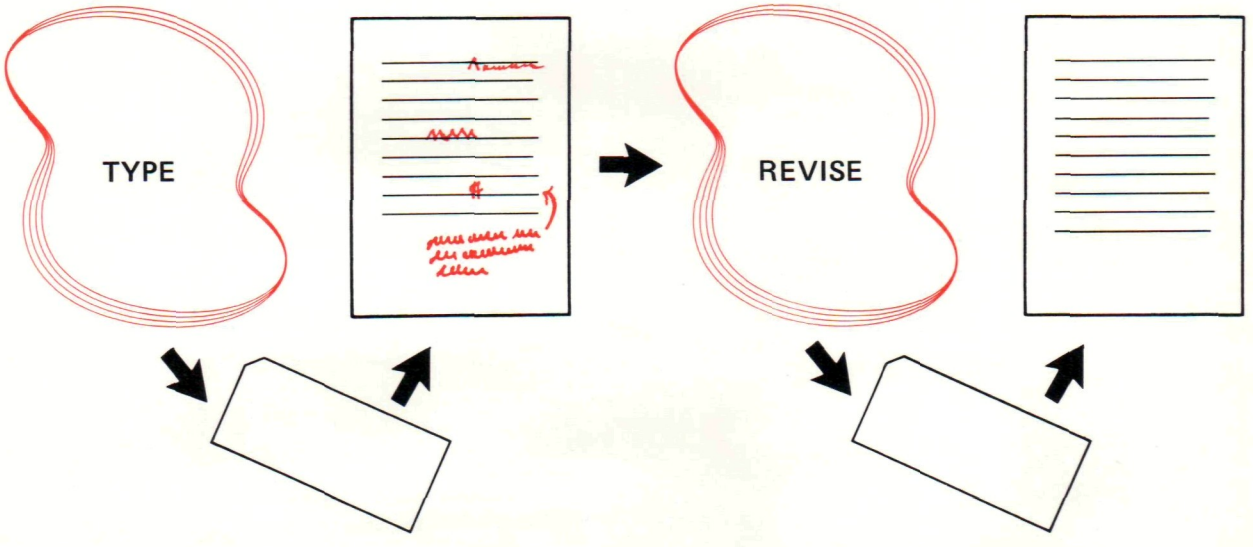
You have now learned how to type into memory, save the text on a magnetic card, and play back copy.



Sometimes this copy may come back to you to be done again because the author has made revisions to the original text.



In this section you will learn how to accomplish text revision using the IBM Mag Card II.



## REVISING THE TEXT

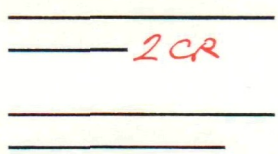
The first thing you want to do when revising a page of text is to quickly locate the point of change in memory.



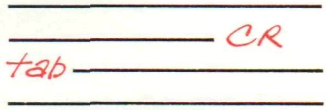
---

Text appears as lines on a page; the lines are grouped into paragraphs by one of the following:

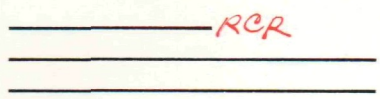
Two or more carrier returns.



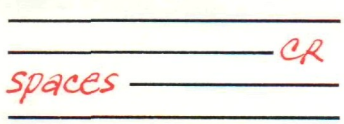

A carrier return followed by a tab.



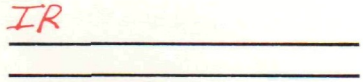

A Required Carrier Return.



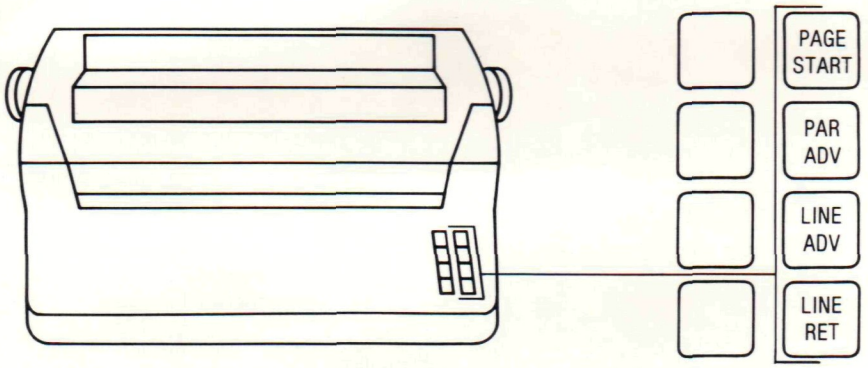

A carrier return followed by a space(s).




An Index Return.

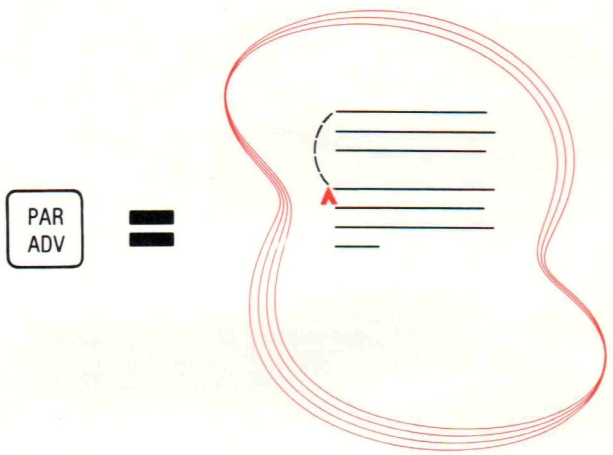


You will use one of the "Access" Buttons on the right side of the keyboard to move the pointer in memory to the text that is to be revised.



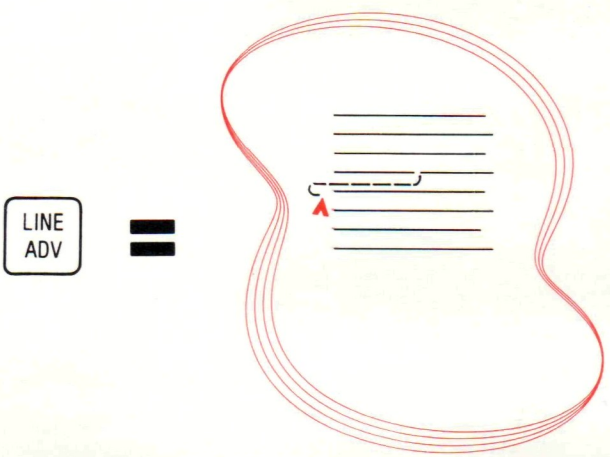

---

The PAR ADV (Paragraph Advance) Button moves the pointer to the beginning of the next paragraph.

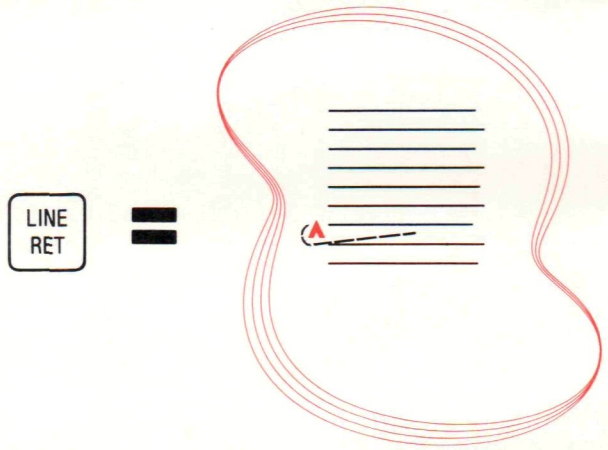



---

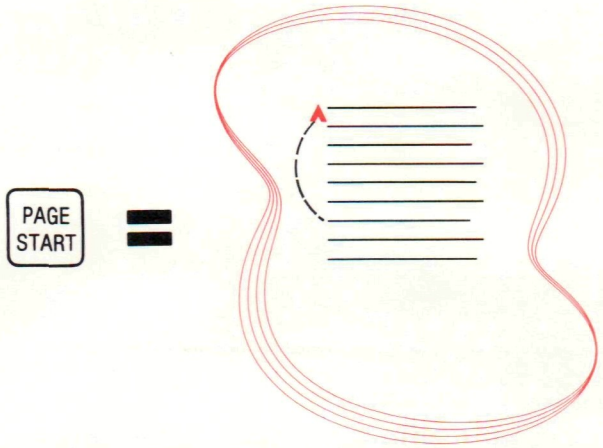
The LINE ADV (Line Advance) Button moves the pointer forward to the beginning of the next line.



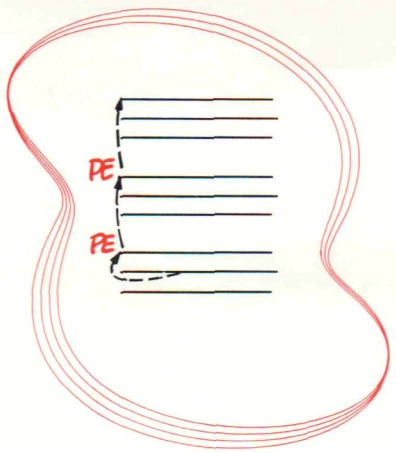
When line advancing through text, you will usually access to the proper line; however, if you line advance too far, you have learned that you can use the LINE RET Button to move the pointer back one line at a time.




Likewise, if you should PAR ADV too many times, you may find it faster to PAGE START (move the pointer to the beginning of memory) and then PAR ADV again.



Up to now, you have been taught that PAGE START moves the pointer to the beginning of memory. However, if there are any Page End Instructions in memory between the pointer and the beginning of memory, each depression of PAGE START moves the pointer back to the text immediately following the preceding Page End Instruction.




Most of the time there is only one page of text in memory, thus depressing PAGE START does move the pointer to the beginning of memory.

**NOTE TO THE STUDENT:**
If you follow the instructions given for using the prerecorded cards with the practice copy in the training manual, the copy in your typewriter will agree with the teaching material. If it does not, ask the IBM Representative to assist you.

## EXERCISE NO. 28. (Card 1)

Follow these steps:

1. Take the first card you duplicated (it should be the bottom card) and place it in the Pack Feed Slot. Retain the other cards for future use.
2. Insert draft paper; set the typewriter for single line spacing.
3. Depress READ. The text on the first card is read into memory; it is like the typewritten copy shown on the opposite page.
4. Depress PAR ADV one time. This takes you past the Index Return at the beginning of the project.
5. Depress WORD to play back the tab and two words of the first paragraph "This report".
6. Depress PAR ADV one time; play back "The Budget".
7. PAR ADV two times; LINE ADV one time to locate the line "first six"; play back these words.
8. LINE RET to the line "on the Sales"; play back these words.
9. PAR ADV repeatedly until nothing happens; this indicates the pointer is at the end of memory.
10. PAGE START.

DO NOT CLEAR MEMORY OR TURN THE TYPEWRITER OFF. You will continue this exercise shortly.

PRACTICE COPY:

This report contains only the condensed status reports from departments that concern your area.

The Budget Department is compiling figures for the last of 1971. Projections for materials, labor, and overhead are vague at this time. Complete figures will be available December 13.

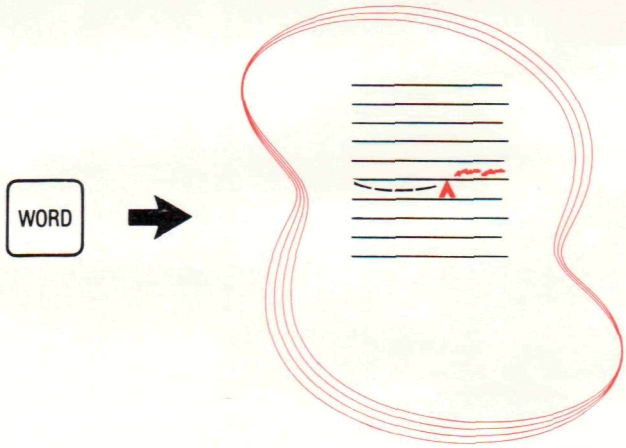
Expansion of marketing emphasis in the West has put great strains on the Sales Department. A marketing study is in process to seek more effective sales techniques.

Activity in the Mail Department has increased 28-30 percent in the first six months of this year. Greater utilization by Sales is given as the reason. More efficient equipment to meet the work load is on order.

The Personnel Department has reduced manpower during the last six months. This reduction was made possible through the implementation of a new recruitment program established by the company.

The above information is for your use only and is not to be used outside your department. Further details and a total report from all departments can be obtained in the President's Office.

Once you have located the line containing the revision, you then play out text to position the pointer at the point of revision.



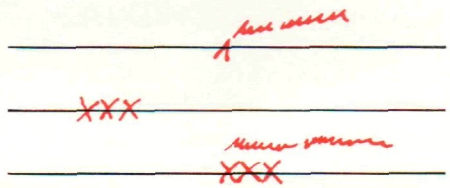

---

Revisions include:

insertions

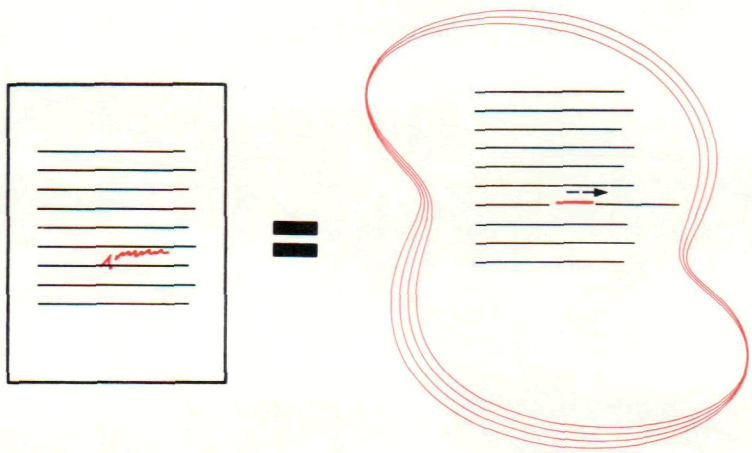
deletions

deletion/insertion

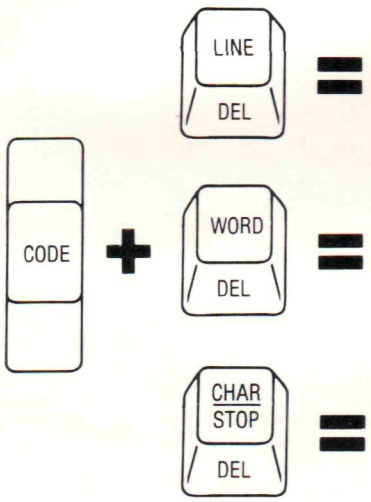


---

Insertions are made by typing the additional text—which may consist of one word or several paragraphs. As you type, the text following the point-of-change is moved over in memory.



Deletions are made by holding down the CODE Button and depressing the appropriate playback button.




- Delete complete line(s).
- Delete word(s) at end of line.

- Delete word, including space, carrier return, or tab following.
- Delete space, carrier return, or tab.

- Delete one character.

---

You also know that backspacing deletes text from memory. Sometimes it is faster to backspace to make the change such as when only the last character of a word is changed:

typine g

- Play back the incorrect word.
- Backspace to delete the space and the incorrect character.
- Type the correct character.
- Retype the space.

---

The backspace method can also be used to add a character at the end of a word:

type d

- Play back the word.
- Backspace to delete the space.
- Type the insertion.
- Retype the space.

## EXERCISE NO. 28
**Continued.**

To revise the copy, follow these steps:

Revision 1
*Deleting a word at the beginning of a line:*
- PAR ADV twice.
- Depress WORD once to play back the tab.
- Delete one word.

Revision 2
*Deleting a word at the end of a line:*
- Play by WORD through the word "of".
- Delete the remainder of the line using LINE DEL. Using LINE to delete gets rid of all the spaces and the carrier return.
- Type "1972. space space" and carrier return.

Revision 3
*Combining paragraphs:*
- LINE ADV one time. (The last carrier return put the pointer just before "Projections".)
- Play by WORD through the second space after "13.".
- LINE DEL one time to eliminate the carrier return.
- WORD DEL one time to delete the tab before "Expansion".

Revision 4
*Making an insertion at the end of a word:*
- PAR ADV one time and LINE ADV twice.
- Play by WORD through the word "equipment".
- Backspace once to position the pointer after the "t" and type a comma and a space. Remember, a space plays back with a word and must be retyped.

Revision 5
*Same as #4 above:*
- Play by WORD through the word "load".
- Backspace once; type a comma and a space.

Revision 6
*Inserting:*
- PAR ADV one time and LINE ADV once.
- Play by WORD through "reduction".
- Type the insertion as indicated; remember to space after typing the last word.

Revision 7
*Adding at the beginning of a line:*
- PAR ADV one time; depress WORD once to play the tab.
- CHAR DEL one time to delete the "T".
- Type "Remember, t".

Revision 8
*Making a paragraph:*
- LINE ADV one time, play by WORD through the second space after "department.".
- Carrier return and tab.

Revision 9
*Making a correction at the end of a word:*
- Play by WORD through "details".
- Backspace twice to remove the "s".
- Replace the space.

DO NOT CLEAR MEMORY. You will continue with this exercise.

**PRACTICE COPY:**

This report contains only the condensed status reports from departments that concern your area.

The Budget Department is compiling figures for the last of 1971. Projections for materials, labor, and overhead are vague at this time. Complete figures will be available December 13.

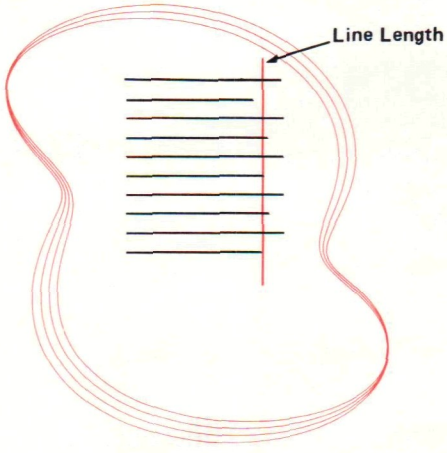
Expansion of marketing emphasis in the West has put great strains on the Sales Department. A marketing study is in process to seek more effective sales techniques.

Activity in the Mail Department has increased 28-30 percent in the first six months of this year. Greater utilization by Sales is given as the reason. More efficient equipment to meet the work load is on order.

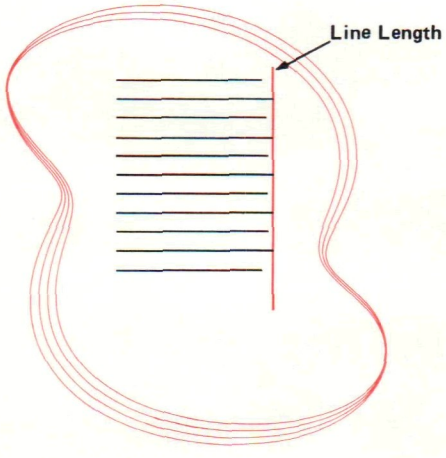
The Personnel Department has reduced manpower during the last six months. This reduction was made possible through the implementation of a new recruitment program established by the company.

The above information is for your use only and is not to be used outside your department. Further details and a total report from all departments can be obtained in the President's Office.

Now that you have made the revisions, the text in memory is correct; however, the revisions have caused the line endings to change.




New line endings are created as you play back final copy.



Follow these steps to play back final copy and create a final card:

1. PAGE START.
2. Insert Paper.
3. Set your typewriter for double spacing.
4. Depress AUTO.
5. Depress REC to create a final card to match the copy.
6. Remove the card from the Stacker and place it in the card tray. You do not need to save this card.

You have just practiced revising, playing back, and rerecording a one-page document.

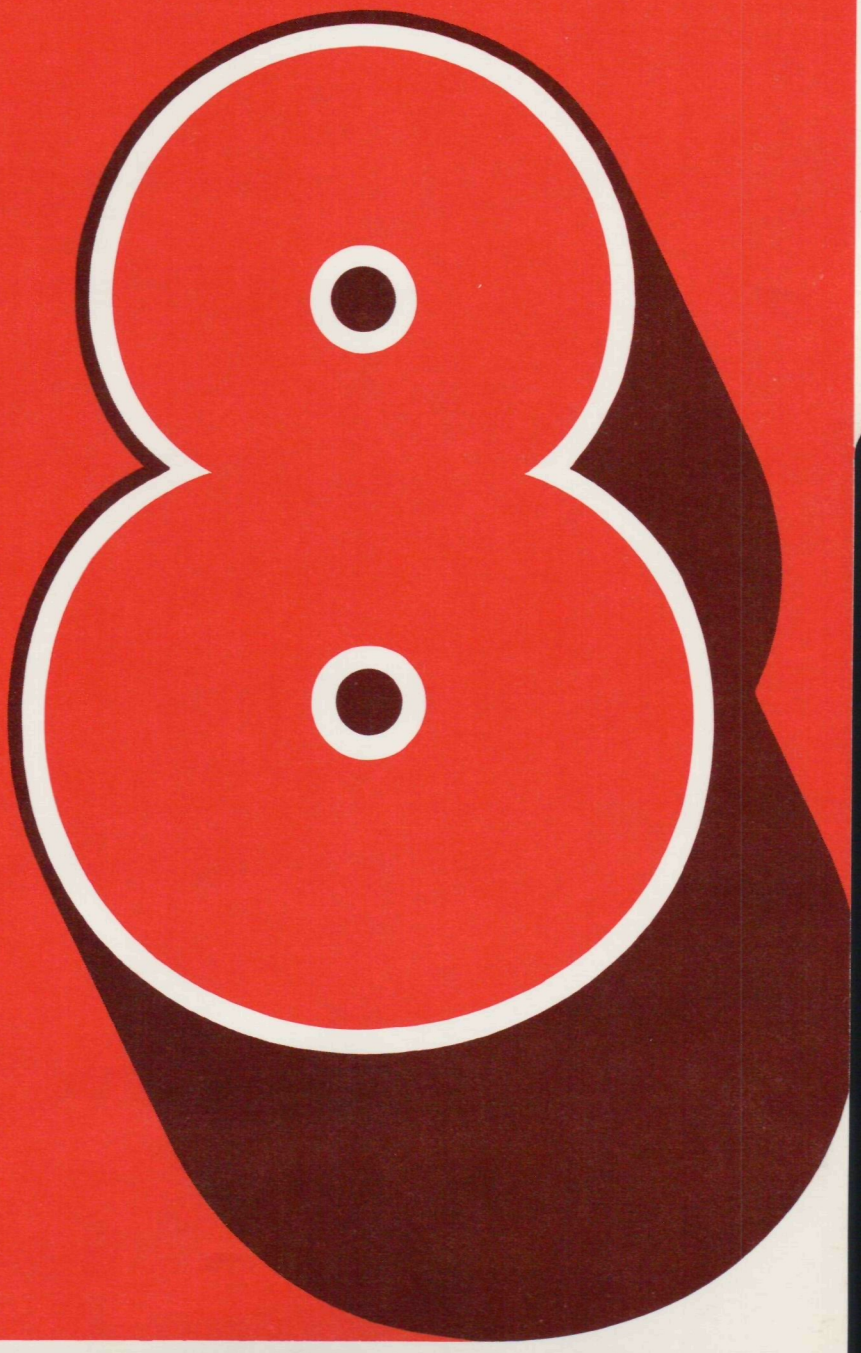
Many times, however, you may be revising multi-page documents, or projects which include tabular or indented formats.

In the following sections, you will learn two different revision procedures.

- Two-Pass
- Scanning

Once you have learned these two methods, you can then decide which procedure is best for the project you are revising.

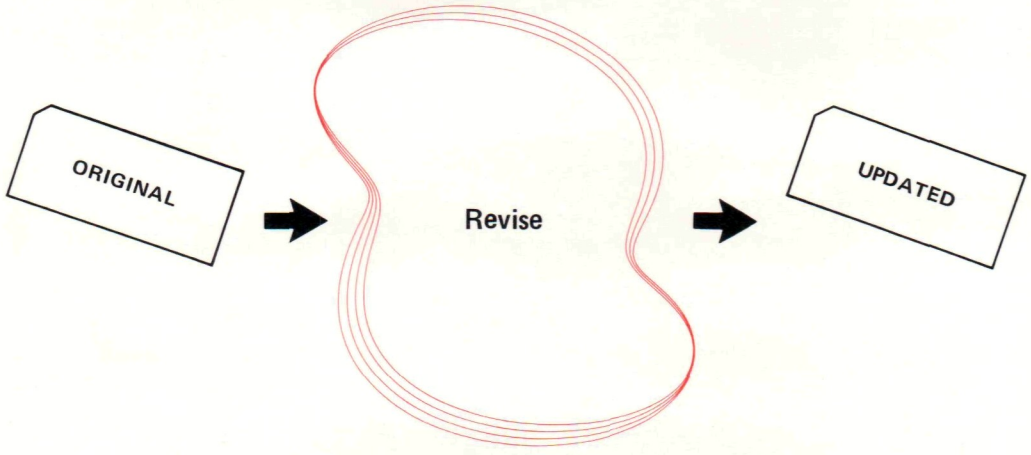
# Two-Pass Revision Procedure



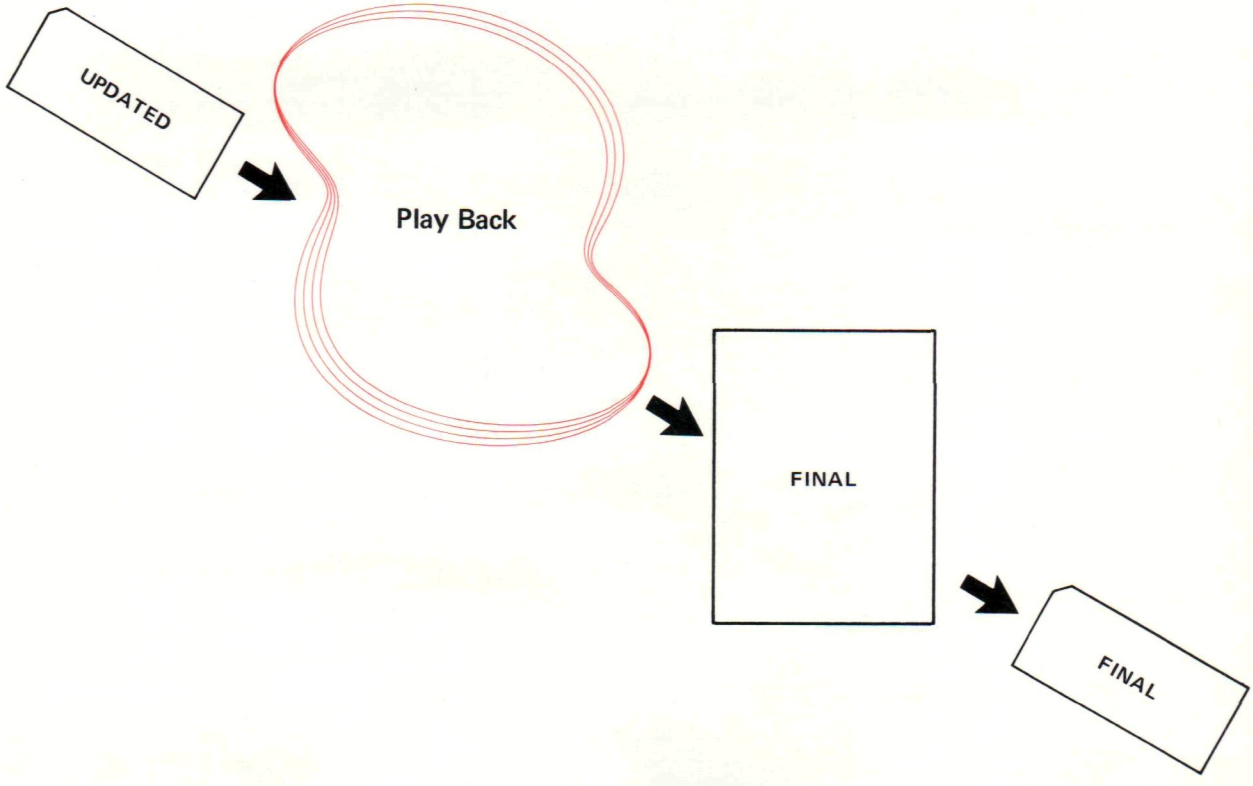
## TWO-PASS REVISION PROCEDURE

When using the Two-Pass Revision Procedure for revising multi-page documents, two steps are involved.

The first step is to revise the complete document, one page at a time, to create updated cards.

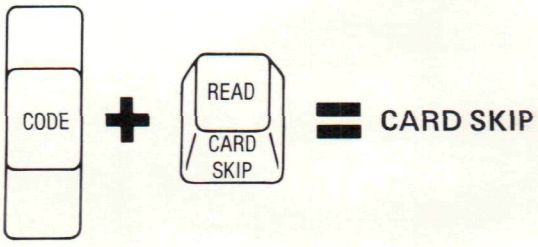



The second step is to read the updated cards back into memory; play back final typewritten pages, and create final cards.



When revising a multi-page document, there may be pages without revisions. During the first step, these pages may be skipped without being read into memory.

To Card Skip, hold the CODE Button and depress READ.




Cards are skipped one at a time. If the page without revisions is recorded on two cards, you must Card Skip twice.

If you read the page into memory before you realize there are no revisions to be made:

1. Card Skip (code READ). The card which is inside the unit will drop to the Stacker.
2. Clear memory.
3. Read the next page.

---

## EXERCISE NO. 29 (Cards 2-5)

The next four pages contain a document to be revised using the Two-Pass Revision Procedure. The instructions for each page of the document are given just before the page.

Follow these instructions step-by-step.

1. Place cards 2, 3, 4 and 5 in the Pack Feed Slot.
2. Insert paper.
3. Set the typewriter for single spacing.
4. READ the page into memory.
5. REVISE the copy.
6. Depress REC after the last revision to create an updated card.

Turn to the next page.

MANUFACTURING COSTS

A manufacturing company incurs costs in accumulating its productive resources, resources which include money, materials, machinery, and manpower. Of these four M's--all of which are necessary to keep a business operating--money is obviously an initial requirement.

Many people wonder where all the money comes from to start a business. Unless a company has investigated the situation thoroughly it can suffer a great loss.

Raising Capital

~~Where does all the money come from which keeps our American business running?~~

There are two sources of corporate funds: external and internal. The terms hint their meaning. Sources of borrowing money outside the business are called external; sources of borrowing money inside the business are called internal.

Let's talk first about external sources of funds and let's talk about them in terms of the Mandor Corporation's beginning. This company began in 1895 when a young man, Glen Mandor, decided that he could earn more money by building and selling a manually operated washing machine than he could ~~earn~~ by continuing to work as a carpenter. He reasoned that if he could build such a machine, it would help housewives perform the family laundry tasks in ~~better~~ a more efficient fashion than by the use of the washboard and wooden tub. If this were so, there would be a demand for such a product. Should he risk the cost of finding out? Here was the profit incentive again.

He built a model, tested it out in his own woodshed, corrected its faults, and then asked several of his neighbors to test it. They assured him that he had built a good product. All of which was good news but he

1. READ the page into memory.
2. REVISE the copy
3. RECORD the page.

Turn to the next page.

had to have money to launch the business, and he had to have it from external sources, for he had only a limited amount of money--and some of that he had already spent on building his model.

There are two kinds of external sources to which an entrepreneur can turn: long-term and short-term. The names tell you that long-term sources permit a longer time for repayment than do short-term sources.

A business usually obtains long-term capital in three ways: (1) through the mortgaging of fixed assets, (such as plants); (2) through the sale of bonds; and (3) through the sale of stocks. When a business obtains money through mortgages and bonds, it undertakes a legal debt on which interest must be paid each year--profits or no profits.

On capital raised by the sale of stocks there is no such legal obligation incurred. Only when a company earns profits need it pay dividends to its stockholders. ¶ When, for example, John purchased a new issue of stock from the ~~Keim~~ Klein Corporation last year, the corporation did not undertake a legal debt to John. Rather, John risked his money on the belief that the firm would operate profitably. As a stockholder he was helping to provide "equity" capital, and as a part owner of the firm, he would receive a return on his investment if the firm succeeded. This purchase of stock has given him a voice in the decision of "his" firm's management when he meets with other stockholders at annual meetings.

But back to the Mandor Corporation and its need of external funds. Young Glen knew that he would need a plant ~~in which to build his machines and~~ manufacturing. he also knew that once he had built the plant, he could mortgage it as a fixed asset. But to whom could he turn to raise the initial money to build the plant?

1. READ the page into memory.
2. REVISE the copy.
3. RECORD the page.

Turn to the next page.

His problem was solved in two ways. His uncle, Mr. Calvert Mandor, lent him money to build the plant and three of his neighbors offered to buy stock in the company. All five men anticipated a successful company with profits; even so, they were assuming risks in the venture and each knew it. Glen was fully aware that he would have to meet interest payments on the mortgage and that all of his stockholders would expect dividends on the stocks they had bought; but ~~as an entrepreneur seeking profits~~, he had to assume the risks involved.

Because Glen would need money to buy equipment and to pay his employees as soon as they began working, ~~and because he would incur these costs~~ before his new machines could produce revenue, he and his uncle talked with Mr. Thomas Ramsey, president of the local bank, about borrowing these necessary funds from the bank. Since Mr. Ramsey thought well of the new venture, for it would bring additional profitable business to the community and to his bank, and since Glen had established an excellent record of repaying money when he had borrowed funds to build his home some years before, Mr. Ramsey was willing to lend him the necessary money.

It is obvious then that one of Glen's heaviest costs in the beginning of his business venture was the interest and principal payments he had to pay on his borrowing. And his experience is that of many American entrepreneurs who risk the assumption of debts in anticipation of future profits from a successful business.

It was not until the Mandor Corporation became a successful enterprise that it became concerned with internal funds, for until business is operating profitably, it cannot have internal sources on which to draw.

There are two sources of internal funds. The first provides funds from the retained profits of the firm. These are funds which are left over

The last page has no revisions, so it may be skipped.

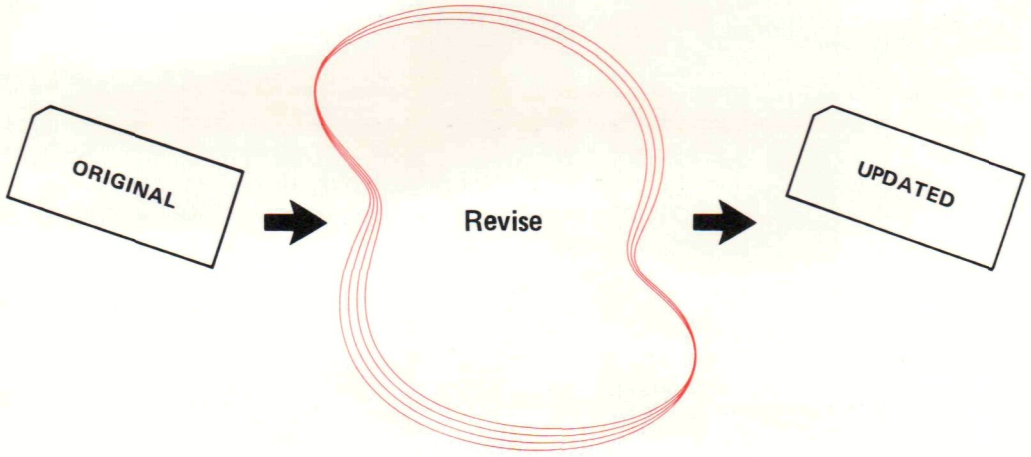
1. Card Skip (code READ).

Turn to the next page.

after all costs are met and after dividends to stockholders are paid. They may therefore be plowed back into the business. The second source of internal funds comes from what is called depreciation of assets, and we shall speak of this later in our story.

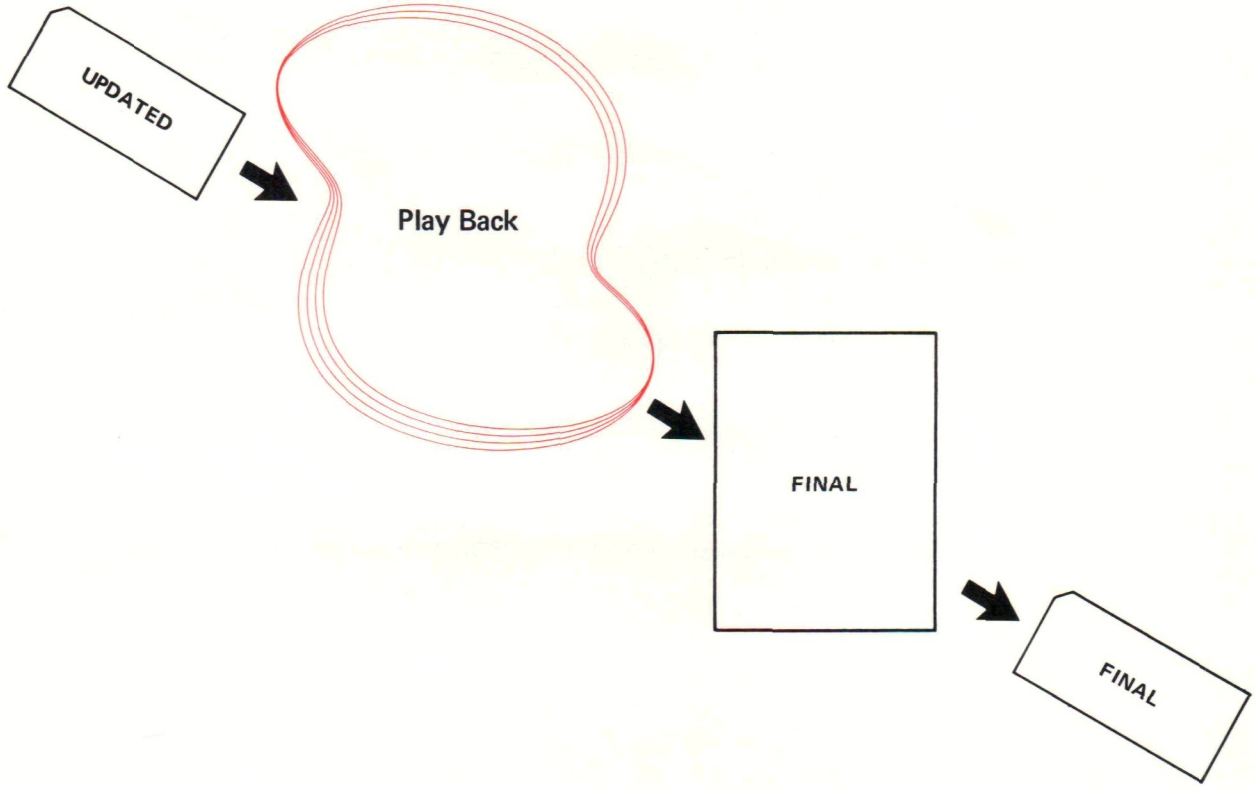
When we add up the corporate funds derived from the external and internal sources of American business for a single year, we can get some idea of what is involved in the financing of American business.

You have now completed the first step in the Two-Pass Revision Procedure; creating updated cards with revised text.




---

The second step is to play out the updated cards to create final typewritten copy and final cards.



Follow these steps to play back final copy and create final cards.

FIRST PAGE

1. Place the updated cards in the Pack Feed Slot.
2. Set the typewriter for double spacing.
3. Depress TPWR; type a line count of 27 (code LINE RET + 27); release TPWR.
4. Insert paper for final playback.
5. READ the first page into memory.
6. Depress AUTO.
7. When playback stops at line count:
   a. Type a Page End Instruction
   b. Depress REC to record the final page.

SECOND PAGE

1. Insert paper.
2. Depress AUTO.
3. While text plays back, READ in the second page.
4. When playback stops at line count:
   a. Type a Page End Instruction.
   b. Depress REC.

THIRD PAGE

1. Insert paper.
2. Depress AUTO.
3. Depress READ.
4. When playback stops at line count:
   a. Type a Page End Instruction.
   b. Depress REC.

FOURTH PAGE

1. Insert paper.
2. Depress AUTO.
3. Depress READ.
4. When playback stops, all material has now played back.
5. Depress REC to record the page.
6. Remove the cards from the Stacker. You do not need to save these cards.

## REVIEW

Now that you have completed the exercises, lets review the principles you have just learned in the Two-Pass Revision Procedure.

STEP 1 — Revising the text and creating updated cards.

1. Place the cards to be revised in the Pack Feed Slot.
2. READ a page into memory.
3. REVISE the copy.
4. RECORD the updated page to create an updated card.
5. Continue with steps 2-4 until the project is complete.

Remember: You can use Card Skip if a page has no changes.

---

STEP II — Playing back to create final typewritten copy and final cards.

1. Place the updated cards in the Pack Feed Slot.
2. Set the typewriter for the correct spacing.
3. Enter a line count.
4. Insert paper for playback.
5. READ a page into memory.
6. Depress AUTO to begin playback.
7. When playback stops at line count:
   a. Type a Page End Instruction.
   b. Depress REC to record the page and create a final card.
8. Insert paper for the next page.
9. Depress AUTO.
10. Depress READ.
11. When playback stops at line count follow the procedure described in step 7.
12. Repeat steps 8-11 until the project is complete.

Prerecorded Exercise Cards 6-10 contain two different jobs to be revised.

In the next exercise, you will follow the same Two-Pass Revision Procedure. You will also see how easy it is to batch your work. Card 6 contains a tabular project; cards 7-10 contain an indented project. You will revise both jobs before playing back.

Load cards 6-10 in the Pack Feed Slot.

Be sure to follow all instructions for both revising and playing back.

## REVISING TABLES

As you know, tables are always typed and played back with the NO ZONE Button down. Tables are also revised with the NO ZONE Button down.

NO ZONE = TABLES

DOWN

---

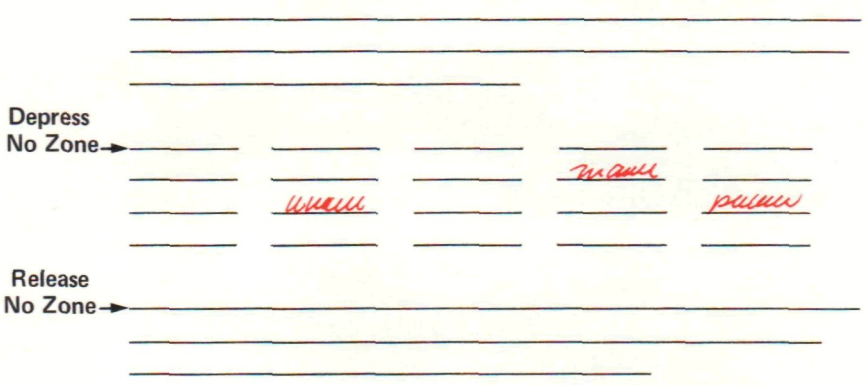
To insert a line:

| | | |
|---|---|---|
| 1964 | 786.00 | 18.32 |
| 1965 | 654.80 | 16.50 |
| 1966 | 568.20 | 15.03 |
| 1967 | 437.18 | 13.98 |

play back the line preceding the insertion. Use this as a guide for inserting the new line and aligning columns.

---

When the table is between text:




- Locate the first line of the table.
- Depress NO ZONE.
- Make the corrections to the table.
- Release NO ZONE.
- Continue with the text revisions.

## EXERCISE NO. 30 (Card 6)

Follow these steps:

1. Set the typewriter for single spacing.
2. READ the page into memory.
3. REVISE the copy. Remember, NO ZONE is down when revising a table.
4. RECORD the page.
5. Leave the card in the Stacker. Remember, you are batching your work and will play back later.

**PRACTICE COPY:**

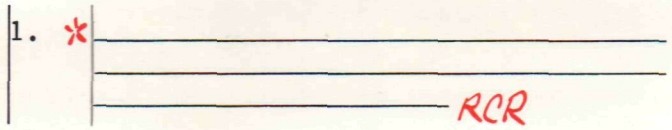
This will confirm our telephone conversation of two this morning. Among the new group of sales trainees, only ~~three~~ men have had net sales of more than $30,000 during the present month. ~~They~~ ~~are:~~

| Salesman | Gross | Net |
|---|---|---|
| Arthur MacDougall | $39,776 | $36,267 |
| Francis Woodward | 36,177 | 33,275 |
| Robert Jackson | 35,082 | 33,135 |

All of these men have outstanding records, as I am sure you will agree. If they continue to develop their abilities at the same rate during the next year, I ~~feel~~ am certain that they will be among our top producers within the next five years.

## REVISING INDENTED MATERIAL

When revising indented material, remember that the first line of each paragraph is typed with Required Tabs; the last line ends with a Required Carrier Return.




---

If you delete a tab with a word:




remember to retype it as a Required Tab.

---

Likewise, when you delete the last word in a paragraph:




remember to replace the Required Carrier Return.

## EXERCISE NO. 31. (Cards 7-10)

Follow these steps:

1. Make sure duplicate cards 7, 8, 9 and 10 are still loaded in the Pack Feed Slot.
2. READ the page into memory.
3. REVISE the copy.
4. RECORD the page.

Turn to the next page.

1. THE DISSEMINATION PROBLEM

How to get information to people who need it, as it becomes available, is a problem which has perplexed government and industry for a long time. Many organizations are discovering that when their personnel are not properly informed, they lose money. Not only do busy workers find it difficult to keep abreast of new developments, but they are often not even aware that information exists on these developments. Furthermore, people are finding more and more that their interests overlap. The specialist of today has to draw on diversified information to solve his problems. The automotive engineer, for example, must learn about the biological and sociological effects of urban air pollution due to automobile exhaust fumes. How is he to gather the needed information, ~~however,~~ if the automotive trade journals which he receives do not cover the effect of noxious gases on the human body or on urban life as a whole?

The information dissemination problem is not restricted to areas as large as the automotive industry: medium-size businesses are also facing it with great concern. For them too, it is no longer adequate to ~~attached~~ attach a routing slip to all new material and trust that it will reach all those involved, and only those involved. Management at all levels is being subjected to an unending stream of both internal and external literature, including reports, periodicals, books, specifications, and so forth. Time is being wasted in every department as personnel search for needles of information in haystacks of unwated material.

1. READ the page into memory.
2. REVISE the copy.
3. RECORD the page.

Turn to the next page.

## 2. THE SDI SYSTEM

To break through the steadily thickening information barriers, and prevent this critical situation from becoming worse, ~~we have~~ the company has developed a system that delivers information to the right people at the right time. Called "selective dissemination of information" (SDI), it enables personnel ~~are able~~ to absorb all new information on their respective subjects of concern. The system may save days, or even weeks, of unnecessary effort and possibly result in a considerable leap ahead of competitors.

The SDI system is the mechanization of the answer to two questions which companies ask themselves:

a. Who in our organization should receive what information? b. How can we help them absorb the abundance of material we have to distribute?

## 3. DOCUMENT AND RECIPIENT PROFILES

To look closely at the first question, assume that a color TV engineer develops such a radical improvement in picture circuitry that the manufacturer decides to curtail production of the current model until the design change is made. Instantly they begin an abundance of correspondence, memos, engineering drawing, purchase orders, etc. The engineering change causes a virtual upheaval in color TV set production and sales. Should a single individual or group be lacking the proper information, it could mean many thousands of dollars in wasted time and even more in color TV set sales.

1. READ the page into memory.
2. REVISE the copy.
3. RECORD the page.

Turn to the next page.

Narrowing the problem to just one department's operation, the photograph ~~section~~ department has had a specific request from the Sales Department for a picture of the new color TV. How do they know that the Advertising department also needs one for a press release? If the photograph department's problem can be solved, perhaps the solution can be applied to the overall dissemination of information problem in the TV plant.

Essentially, the job of the photograph department is to see that all necessary pictures are taken, and potential users ~~wither~~ ed receive them or know they are available. The necessary types of pictures include identification photographs of new employees, publicity photographs at meetings of the board of directors, new product photographs, assembly photographs for service literature and for certain catalog illustrations, etc. The potential users are the various individuals or departments that regularly need one or another type of picture. ¶ If the photograph department creates a profile to characterize each picture as to specific subject and general type and another profile to characterize each potential user as to the type of picture regularly required, then, by comparing the two sets of profiles, the department can notify the right people about the photos. ¶ The profile technique can be applied to the entire information dissemination problem in the organization. That is, a profile can be prepared for every kind of document and for every potential user. Each profile is made up of characteristic terms called "keywords", a word selected on the one hand from the language of the document, as well as from the specialized vocabulary of the user.

4. DOCUMENT ABSTRACTS

With this control established over who should receive what information, the dissemination problem only reaches partial fulfillment; still a matter of concern is the abundance of material generated daily, in the form of periodicals, internally written reports, production

1. READ the page into memory.
2. REVISE the copy.
   **NOTE:**
   When you delete an entire paragraph you must also delete the extra carrier return following it.
3. RECORD the page.

Turn to the next page.

schedules, specifications, etc. Since recipients are unable to read it ~~at~~ all, many companies have concluded that the only way to get all the essential information to people in such a form that they can absorb it, is to condense the material to about ten percent of its original length and distribute the resulting abstracts instead of the complete documents.

~~A condensing technique can be used to increase the cources of information for each individual, and at the same time reduce the volume of literature which he must read, thus enabling him to be better informed while studying less.~~

5. SELECTING DOCUMENTS

In a typical SDI system using data processing machines, new documents are screened by an editor who is thoroughly familiar with the needs of the organization. If ever some doubt arises as to the value of entering a particular document into the system, it is better to enter it rather than risk losing important information.

You have now finished revising the tabular and indented projects and are ready for the playback step.

Follow these steps to play back both documents.

Take the updated cards from the Stacker and place them in the Pack Feed Slot.

Tabular Material

1. Set the typewriter for single spacing.
2. Insert paper for playback.
3. READ the page into memory.
4. Depress AUTO.
5. When playback stops at the Stop Instruction, depress NO ZONE. Play out the table. Release NO ZONE when playback stops at the Stop Instruction after the table.
6. When playback stops at the end of the page, depress REC.
7. Remove the card from the Stacker and file it with the typewritten copy.

Indented Material

1. Set the typewriter for double spacing.
2. Depress TPWR. Enter a line count of 27. Release TPWR.
3. Insert paper for playback.
4. READ the page into memory.
5. Depress AUTO.
6. When playback stops at line count:
   a. Type a Page End Instruction.
   b. Depress REC.
7. Insert paper for playback of next page.
8. Depress AUTO.
9. READ the next page.
10. Follow the page end procedure. (step 6).
11. Continue with steps 7-10 until the project is complete.
    NOTE:
    Since you added material, you will need 5 cards for playback. When you depress REC after playing back the last page the Green Light will come on solid. Insert a card in the Single Card Slot.
12. Remove the cards from the Stacker. You do not need to save these cards.

# Revise and Scan



## REVISE AND SCAN PROCEDURE

In this section you will learn a revision procedure called Revise and Scan.

Scanning is a new and unique way of creating final cards without playing back to rearrange lines and pages.

In scanning, these decisions—line endings and page length—are made in memory.

In the Revise and Scan Procedure there are two steps involved:

- Revising and scanning the text—one page at a time.
- Playing back final cards.

---

## REVISING AND SCANNING THE TEXT

The first step, revising the text, is accomplished in the same manner you have just learned. Cards are loaded into the Pack Feed Slot, read into memory, and the revisions are made one page at a time.

After the revisions have been made to the page of text in memory, the text is scanned. Once again, scanning means that the IBM Mag Card II "reads" the text in memory and rearranges the line endings, just as it does during playback. Scanning in memory is identical to playing back the text except that:

- It takes place in memory; no final copy is produced during the scanning process.
- Scanning in memory is much faster than playback.

After the text is scanned and a final page is created in memory, it is recorded back onto the card, thus creating a final card.

---

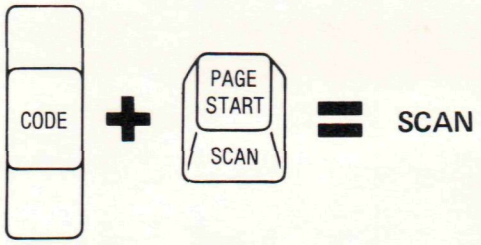
## PLAYING BACK FINAL CARDS

The second step is the playback of the final cards. Since the line ending and page ending decisions were made during the scanning process, there is no need for you to watch playback or make hyphenation decisions. You can be performing other duties while monitoring playback.

## Scanning the Text

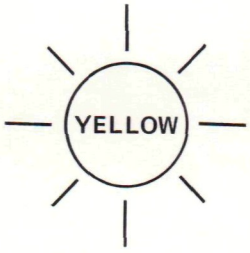
Before you begin scanning the text, lets review some of the things that will be taking place during the scanning process.

The Scan Instruction is given by holding down the CODE Button and depressing PAGE START.




---

As the typewriter is scanning the text, rearranging the lines, the Yellow Light is flashing. This tells you that scanning is taking place.




---

As the typewriter scans, it looks for two things:

- words that will need to be hyphenated.
- the number of lines to fulfill the line count you entered.

## Hyphenation

When the typewriter sees a word that exceeds the Line End Zone, it prints the word and the line number. This is so you can make the hyphenation decision.

Example:

```
15   typewri  ter
```

**OR**

```
15-  typewri  ter
```

This tells you that word "typewriter" extends beyond the Line End Zone on Line 15. The space between the "i" and the "t" indicates the end of the line established in the typewriter.

The line number is given so that you will be aware of words coming up for hyphenation on succeeding lines.

A hyphen after the line number tells you that this is the last word of a paragraph.

---

When a hyphenation decision is given, you may do one of three things:

- Hyphenate the word.
- Let the complete word remain at the end of the line.
- Move the complete word to the beginning of the next line.

---

To hyphenate the word:

- Play by CHAR to the end of the syllable
- Type a hyphen
- Depress AUTO

The typewriter carrier returns and resumes scanning automatically. Your paper looks like this:

```
15   typewri  ter   type-
```

To let the complete word remain at the end of the line:

- Depress AUTO

The typewriter will print the entire word and continue scanning. Your paper looks like this:

```
15   typewri  ter   typewriter
```

---

To move the complete word to the beginning of the next line:

- Carrier return

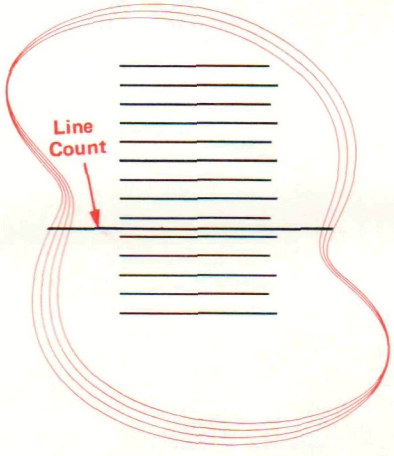
The typewriter will carrier return and resume scanning. Your paper will look like this:

```
15   typewri  ter
```

---

## Page Endings

After you have made the hyphenation decisions, the typewriter continues scanning until it reaches the line count you entered.




---

When line count is reached, the typewriter prints the line number followed by a line of text.

If using a line count of 27, for example, when line count is reached, your copy will appear like this:

27

This line is called a "reference line." It tells you what the last line of text on this page will be.

When text is scanned, sometimes the number that prints with the reference line may not be the same as the line count number you entered. For example with a line count of 27 you may also see:

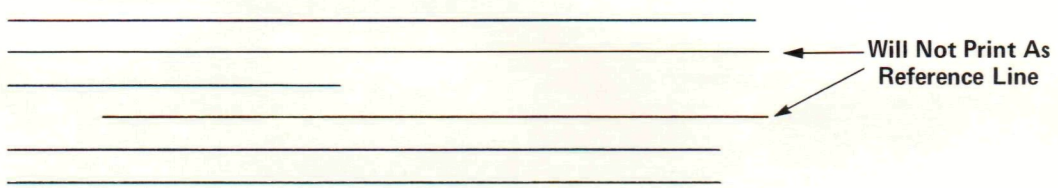
28 _____

**OR**

26 _____.

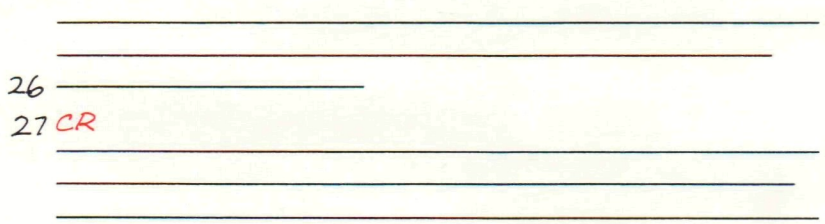
---

The typewriter "knows" that it cannot leave one line of a paragraph to be the first line of the next page. Nor will it print the first line of a paragraph as the last line of a page.




---

Also, if the actual line count line is a carrier return between paragraphs:




The typewriter will print the preceding line as the reference line. Thus, you will see:

26 _____

Both carrier returns will be included at the bottom of the page. Thus, the next page will begin with a line of text.

Before doing the following Revise and Scan exercises, you will need to duplicate the last nine prerecorded exercise cards.

1. Take exercise cards 2 through 10 from their folder.
2. Duplicate them.
   a. Place cards for recording in the Pack Feed Slot.
   b. READ the card to be duplicated in Single Card Slot. Remove it.
   c. Depress REC.
   d. Repeat steps a-c for each card.
3. Place the original cards back in the folder.
4. Take the duplicate cards from the Stacker and place them in the card tray. You will use them shortly.

---

## EXERCISE NO. 32 (Cards 2-5)

In this exercise, you will be revising the four-page document entitled "Manufacturing Costs."

Since the Revise and Scan procedure is a sequential process, be sure to follow the instructions step-by-step exactly as they are given.

The instructions for each page of the exercise are given on the facing page, or just above the exercise.

1. Place cards 2, 3, 4 and 5 in the Pack Feed Slot.
2. Insert paper.
3. Depress TPWR and center a line count of 27, Release TPWR.
4. Set the typewriter for single spacing.
5. READ the first page into memory.
6. REVISE the text.
7. SCAN the page. (code PAGE START).
   a. Notice the Yellow Light flashing while the typewriter scans the text.
   b. Make hyphenation decisions as they are presented.
8. SCAN (code PAGE START) again to record the text when the Reference Line prints.

Turn to the next page.

MANUFACTURING COSTS

A manufacturing company incurs costs in accumulating its productive resources, resources which include money, materials, machinery, and manpower. Of these four M's--all of which are necessary to keep a business operating--money is obviously an initial requirement.

Raising Capital

Perhaps you have asked the question:

Where does all the money come from which keeps our American business running?

If you have never been involved with a large company you would need to investigate this.

There are two sources of corporate funds: external and internal. The terms hint their meaning. Sources of borrowing money outside the business are called external; sources of borrowing money inside the business are called internal.

Let's talk first about external sources of funds and let's talk about them in terms of the Mandor Coporation's beginning. This company began in 1895 when a young man, Glen Mandor, decided that he could earn more money by building and selling a ~~manually operated~~ washing machine than he could earn by continuing to work as a carpenter. He reasoned that if he could build such a machine, it would help housewives perform the family laundry tasks in better fashion than by the use of the washboard and wooden tub. If this were so, there would be a demand for such a product. Should he risk the cost of finding out? Here was the profit incentive again.

He built a model, tested it out in his own woodshed, corrected its faults, and then asked several of his neighbors to test it. They assured him that he had built a good product. All of which was good news but he

Notice that when you scanned the second time, two things happened:

- The text up to and including the reference line was recorded onto the card inside the unit. The card then dropped into the Stacker.
- The rest of the text in memory was scanned, stopping for hyphenation decisions if necessary.

When a word prints for hyphenation and you make the hyphenation decision as usual the typewriter goes on scanning to the end of text.

When the typewriter finishes scanning the rest of the text in memory only a line number prints on the paper.

Example:

04

This tells you that there are a few lines left in memory that will go to the top of the next page. Remember you should always scan until you get the out-of-text indication (a number by itself).

You are now ready to continue Revising and Scanning the next page.

## EXERCISE NO. 32 (Continued)

1. READ the next page into memory.
2. REVISE the text.
3. SCAN the text (code PAGE START)
4. SCAN again when the Reference Line prints.

Turn to the next page.

had to have money to launch the business, and he had to have it from external sources, for he had only a limited amount of money--and some of that he had already spent on building his model.

There are two kinds of external sources to which an entrepreneur can turn: long-term and short-term. The names tell you that long-term sources permit a longer time for repayment than do short-term sources.

A business usually obtains long-term capital in three ways: (1) through the mortgaging of fixed assets, such as plants and equipment; (2) through the sale of bonds; and (3) through the sale of stocks. When a business obtains money through mortgages and bonds, it undertakes a legal debt on which interest must be paid each year, even in years where there are no profits. ~~--profits or no profits.~~

On capital raised by the sale of stocks there is no such legal obligation incurred. Only when a company earns profits does it need to pay ~~need it pay~~ dividends to its stockholders. When, for example, John purchased a new issue of stock from the Keim Corporation last year, the corporation did not undertake a legal debt to John. Rather, John risked his money on the belief that the firm would operate profitably. As a stockholder he was helping to provide "equity" capital, and as a part owner of the firm, he would receive a return on his investment if the firm succeeded. This purchase of stock has given him a voice in the decision of "his" firm's management when he meets with other stockholders at annual meetings.

But back to the Mandor Corporation and its need for ~~of~~ external funds. Young Glen knew that he would need a plant in which to build his machines and he also knew that once he had built the plant, he could mortgage it as a fixed asset. But to whom could he turn to raise the initial money to build the plant?

1. READ.
2. REVISE.
3. SCAN.
4. SCAN again when the reference line prints.

Turn to the next page.

His problem was solved in two ways. His uncle, Mr. Calvert Mandor, lent him money to build the plant and three of his neighbors offered to buy stock in the company. All five men anticipated a successful company with profits; even so, they were assuming risks in the venture and each knew it. Glen was fully aware that he would have to meet interest payments on the mortgage and that all of his stockholders would expect dividends on the stocks they had bought; but as an entrepreneur seeking profits, he had to assume the risks involved. ¶ A business usually obtains short-term capital from banks and other lenders, capital on which it pays interest. Such short-term loans are generally repaid within one year.

Because Glen would need money to buy equipment and to pay his employees as soon as they began working and because he would incur these costs before his new machines could produce revenue, he and his uncle talked with Mr. Thomas Ramsey, president of the local bank, about borrowing these necessary funds from the bank. (Usually, the first source for short-term capital is a bank.) Since Mr. Ramsey thought well of the new venture, for it would bring additional profitable business to the community and to his bank, and since Glen had established an excellent record of repaying money when he had borrowed funds to build his home some years before, Mr. Ramsey was willing to lend him the necessary money.

It is obvious then that one of Glen's heaviest costs in the beginning of his business venture was the interest and principal payments he had to pay on his borrowing. And his experience is that of many American entrepreneurs who risk the assumption of debts in anticipation of future profits from a successful business.

It was not until the Mandor Corporation became a successful enterprise that it became concerned with internal funds, for until business is operating profitably, it cannot have internal sources on which to draw.

There are two sources of internal funds. The first provides funds from the retained profits of the firm. These are funds which are left over

1. READ.
2. REVISE.
3. SCAN.
   Notice that on this page when you scan, only a line number prints. There is no Reference Line. This happens because this is the last page of the project and there is no more text to read.
4. SCAN.

You are now through revising this exercise. Turn to the next page.

after all costs are met and after dividends to stockholders are paid. They may therefore be plowed back into the business. The second source of internal funds comes from what is called depreciation of assets, ~~and we shall speak of this later in our story.~~

When we add up the corporate funds derived from the external and internal sources of American business for a single year, we can get some idea of what is involved in the financing of American business.

Now that you have finished revising and scanning the material, your cards are in final form. You are ready to playback the cards and create final copy.

Each card represents a page, therefore, the page endings are now controlled by the cards rather than by the line count in the typewriter. To assure that each page is completely played back, a line count of 00 is entered.

LINE COUNT 00 = PLAYBACK OF FINAL CARDS

---

Since the line ending decisions were made during the scanning process, there is no need to change them during playback. Therefore, final cards are played back with NO ZONE locked down.

NO ZONE = DOWN FOR PLAYBACK OF FINAL CARDS

---

Also, since the cards are in final form, there is no need to rerecord after playback.

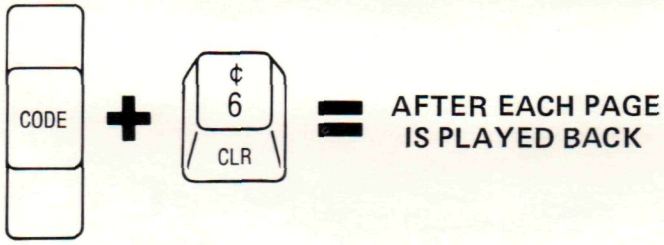
Therefore, the TPWR Button is also latched down to play back final cards.

TPWR = DOWN FOR PLAYBACK OF FINAL CARDS

When the TPWR Button is latched down, cards read from the Pack Feed Slot do not stay inside the Card Unit. Instead, a card is read and then drops into the Stacker.

---

Because text is not recorded onto a card after a page is played back, it is necessary to manually clear memory after playing back each page.



## EXERCISE NO. 32-A

### PLAYING BACK FINAL CARDS

1. Place the final cards in the Pack Feed Slot.
2. Set the typewriter for double spacing.
3. Depress NO ZONE.
4. Depress TPWR.
5. Enter a line count of 00. (Do not release TPWR.)
6. Insert paper for final playback.
7. READ the page into memory.
8. Depress AUTO.
9. When playback stops, clear the memory.
10. Repeat steps 7-9 until the project is complete.
11. Remove the cards from the Stacker and place them in a folder with the typewritten copy. You will use them later.

## REVIEW

Let's review the steps involved in the Revise and Scan Procedure.

- READ a page into memory.
- REVISE the text.
- SCAN (code PAGE START) the revised text.
- SCAN again when the reference line prints; this records the page onto the card inside the unit.

The first time you scan the material, the typewriter reads the revised text, rearranges the line endings, and prints out words that exceed the Line End Zone.

The typewriter continues to scan until it counts enough lines to fulfill the line count. It then prints a line number and reference line. The reference line tells you what the last line will be on that page.

---

After the Revise and Scan Procedure, your revision copy may appear something like this:

(Revisions)

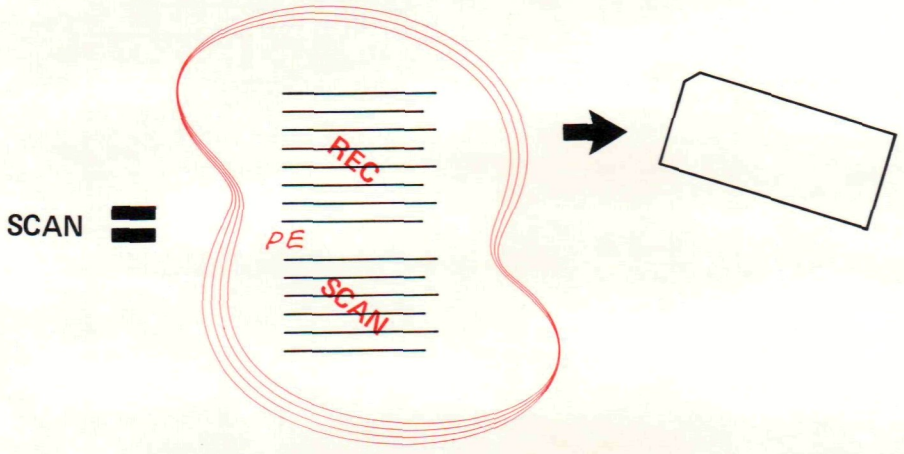
```
15   typewri  ter   type-
18   wonderfu  1
21   manufactu  ring       manufactur-

27
```

this would be the last line that appears on this page.

After the reference line prints, you scan again. When you scan the second time, the typewriter does three things.

- Puts a Page End Instruction at the end of the scanned text.
- Records the scanned material on the card inside the unit.
- Finishes scanning the text remaining in memory.




As the typewriter continues scanning the remaining text, it will print out any words that exceed the Line End Zone. When it has scanned all the text in memory, it will type a number by itself on the paper.

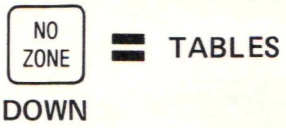
Example:

04

This number tells you the typewriter has run out of text to scan. (It has scanned to the end of memory).

## REVISING TABLES

Tables are revised with the NO ZONE Button down.




---

To insert a line:

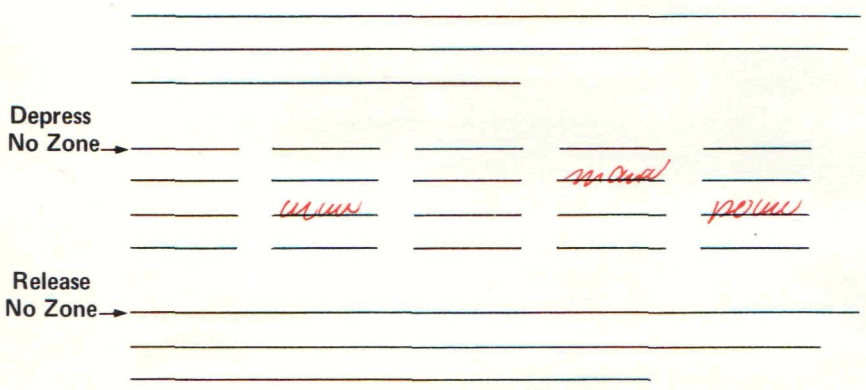
| | | |
|---|---|---|
| 1964 | 786.00 | 18.32 |
| 1965 | 654.80 | 16.50 |
| 1966 | 568.20 | 15.03 |
| 1967 | 437.18 | 13.98 |

play back the line preceding the insertion. Use this as a guide for inserting the new line and aligning columns.

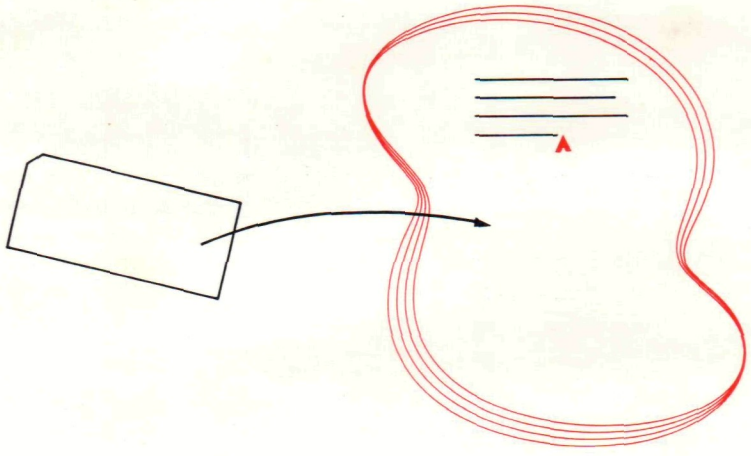
---

When the table is between text:

- Locate the first line of the table.
- Depress NO ZONE.
- Make the corrections to the table.
- Release NO ZONE.
- Continue with the text revisions.



After you see the end of text indication, you are now ready to READ the next page into memory and continue with the revision cycle.



If you are at the end of the project when you see the end of text indication, scan a second time to finish recording the material in memory.

---

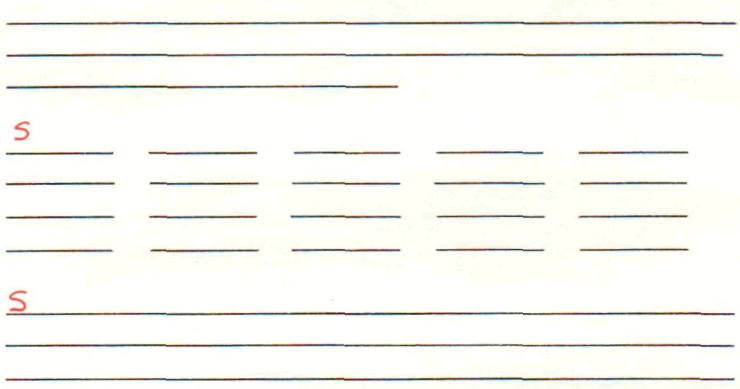
In the next exercise you will follow the same Revise and Scan Procedure you learned in the last exercise. You will also see how easy it is to batch your work. Card 6 contains a tabular project; cards 7-10 contain an indented project. You will revise and scan both jobs before playing back.

| |
|---|
| Load cards 6-10 in the Pack Feed Slot. |

## SCANNING TABLES

Tables are scanned with the NO ZONE Button down. (Remember line endings do not change with the NO ZONE Button down.) When you scan with NO ZONE down, the line endings do not change; however, the typewriter does count the lines so it can determine the end of page.

When tables and text are mixed, remember that you must type a Stop Instruction before and after the table.




Scanning will stop at a Stop Instruction.

---

You will know scanning has stopped because of a Stop Instruction when a line number followed by the letter "s" prints.

```
16s
```

To scan the table:

- Depress NO ZONE.
- Scan.
- When scanning stops (at the Stop Instruction) at the end of the table release NO ZONE.
- Continue scanning.

## EXERCISE NO. 33

Follow these steps:

1. READ the next card into memory.
2. REVISE the copy. Remember, NO ZONE is down when revising a table.
3. SCAN. When scanning stops at the Stop Instruction at the beginning of the table, depress NO ZONE.
4. SCAN the table. When scanning stops at the Stop Instruction at the end of the table, release NO ZONE.
5. SCAN to the end of the text.
6. SCAN to record the updated text.
7. Leave the card in the Stacker; you will play back later.

**PRACTICE COPY:**

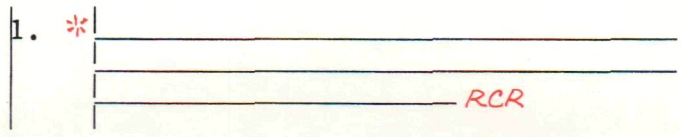
This will confirm our telephone conversation of ~~this~~ two morning. Among the new group of sales trainees, only ~~three~~ men have had net sales of more than $30,000 during the present month. ~~They~~ ~~are:~~

| Salesman | Gross | Net |
|---|---|---|
| Arthur MacDougall | $39,776 | $36,267 |
| Francis Woodward | 36,177 | 33,275 |
| Robert Jackson | 35,082 | 33,135 |

All of these men have outstanding records, as I am sure you will agree. If they continue to develop their abilities at the same rate during the next year, I ~~feel~~ am certain that they will be among our top producers within the next five years.

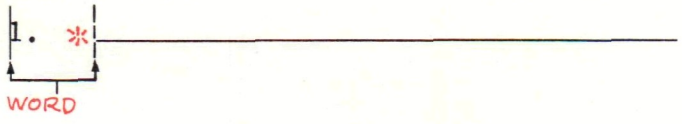
## REVISING INDENTED MATERIAL

When revising indented material, remember that the first line of each paragraph is typed with Required Tabs; the last line ends with a Required Carrier Return.




---

If you delete a tab with a word:




remember to retype it as a Required Tab

---

Likewise, when you delete the last word in a paragraph:




remember to replace the Required Carrier Return.

---

## EXERCISE NO. 34

**Revising and Scanning Indented Material**

1. Insert paper.
2. Depress TPWR. Set a line count of 27. Release TPWR.
3. READ the page.
4. REVISE.
5. SCAN.
6. SCAN.

Turn to the next page.

**NOTE:**
As you revise this exercise, you will be adding a large amount of information. Because of this, you will need one additional card when you get to the last page.

The instructions for inserting the card are given at the time you will need it.

## 1. THE DISSEMINATION PROBLEM

How to get information to people who need it, as it becomes available, is a problem which has perplexed government and industry for a long time. Many organizations are discovering that when their personnel are not properly informed, they lose money. Not only do busy workers find it difficult to keep abreast of new developments, but they are often not even aware that information exists on these developments. Furthermore, people are finding more and more that their interests overlap. The specialist of today has to draw on diversified information to solve his problems. The automotive engineer, for example, must learn about the biological and sociological effects of urban air pollution due to automobile exhaust fumes. How is he to gather the needed information, ~~however~~, if the automotive trade journals which he receives do not cover the effect of noxious gases on the human body or on urban life as a whole?

The information dissemination problem is not restricted to areas as large as the automotive industry: medium-size businesses are also facing it with great concern. For them too, it is no longer adequate to ~~attached~~ attach a routing slip to all new material and trust that it will reach all those involved, and only those involved. Management at all levels is being subjected to an unending stream of both internal and external literature, including reports, periodicals, books, specifications, and so forth. Time is being wasted in every department as personnel search for needles of information in haystacks of unwated material.

1. READ.
2. REVISE.
3. SCAN.
4. SCAN.

Turn to the next page.

2. THE SDI SYSTEM

To break through the steadily thickening information barriers, and prevent this critical situation from becoming worse, ~~we have~~ the company has developed a system that delivers information to the right people at the right time. Called "selective dissemination of information" (SDI), it enables personnel ~~are able~~ to absorb all new information on their respective subjects of concern. The system may save days, or even weeks, of unnecessary effort and possibly result in a considerable leap ahead of competitors.

The SDI system is the mechanization of the answer to two questions which companies ask themselves:

a. Who in our organization should receive what information? b. How can we help them absorb the abundance of material we have to distribute?

3. DOCUMENT AND RECIPIENT PROFILES

To look closely at the first question, assume that a color TV engineer develops such a radical improvement in picture circuitry that the manufacturer decides to curtail production of the current model until the design change is made. Instantly they begin an abundance of correspondence, memos, engineering drawing, purchase orders, etc. The engineering change causes a virtual upheaval in color TV set production and sales. Should a single individual or group be lacking the proper information, it could mean many thousands of dollars in wasted time and even more in color TV set sales.

1. READ.
2. REVISE.
3. SCAN.
4. SCAN.

Turn to the next page.

Narrowing the problem to just one department's operation, the photograph section has had a specific request from the Sales Department for a picture of the new color TV. How do they know that the Advertising department also needs one for a press release? If the photograph department's problem can be applied to the overall dissemination of information problem in the TV plant.

Essentially, the job of the photograph department is to see that all necessary pictures are taken, and potential users either receive them or know they are available. The necessary types of pictures include identification photographs of new employees, publicity photographs at meetings of the board of directors, new product photographs, assembly photographs for service literature and for certain catalog illustrations, etc. The potential users are the various individuals or departments that regularly need one or another type of picture. If the photograph department creates a profile to characterize each picture as to specific subject and general type and another profile to characterize each potential user as to the type of picture regularly required, then, by comparing the two sets of profiles, the department can notify the right people about the photos.

4. DOCUMENT ABSTRACTS

With this control established over who should receive what information, the dissemination problem only reaches partial fulfillment; still a matter of concern is the abundance of material generated daily, in the form of periodicals, internally written reports, production

1. READ.
2. REVISE.
3. SCAN.
4. SCAN again. Notice you get another reference line. This is because you have added enough text to create a new page.
5. SCAN - to record all the text. Notice the Green Light will come on Solid. Insert a card in the Single Card Slot.

Turn to the next page.

schedules, specifications, etc. Since recipients are unable to read ~~at~~ it all, many companies have concluded that the only way to get all the essential information to people in such a form that they can absorb it, is to condense the material to about ten percent of its original length and distribute the resulting abstracts instead of the complete documents.

~~A condensing technique can be used to increase the courees of information for each individual, and at the same time reduce the volume of literature which he must read, thus enabling him to be better informed while studying less.~~

5. SELECTING DOCUMENTS

In a typical SDI system using data processing machines, new documents are screened by an editor who is thoroughly familiar with the needs of the organization. If ever some doubt arises as to the value of entering a particular document into the system, it is better to enter it rather than risk losing important information.

## EXERCISE NO. 34-A

### PLAYING BACK FINAL CARDS

1. Load the updated cards in the Pack Feed Slot.
2. Enter a line count of 00.
3. Insert paper for playback.
4. Depress NO ZONE.
5. Depress TPWR.

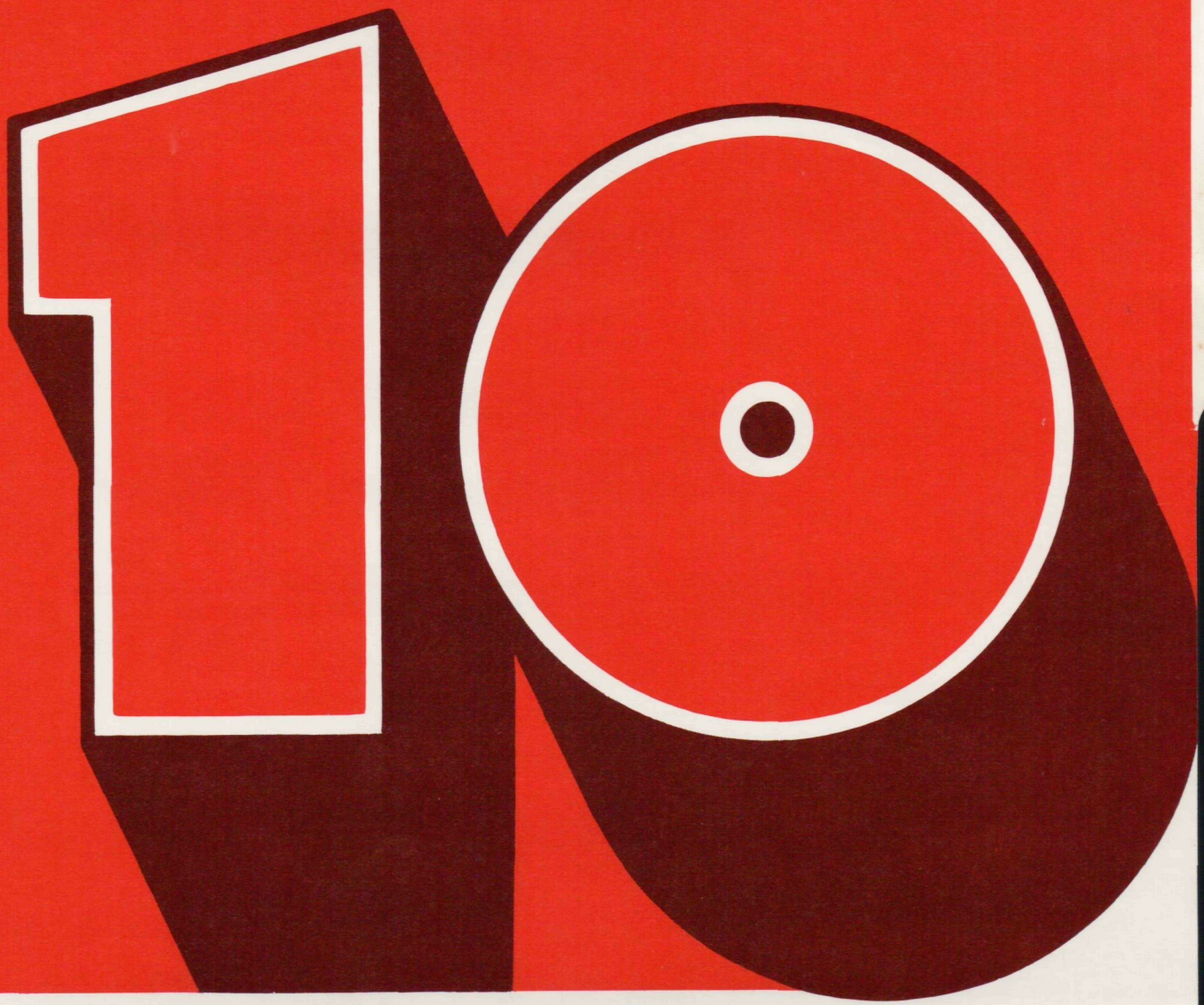
Tabular material mixed with text.

1. Set the typewriter for single spacing.
2. READ the page.
3. PLAYBACK. Playback will stop at the Stop Instruction preceding and following the table. As NO ZONE is already depressed, depress AUTO to continue playback.
4. CLEAR MEMORY.
5. Take the card out of the Stacker and file it with the playout copy.

Indented material.

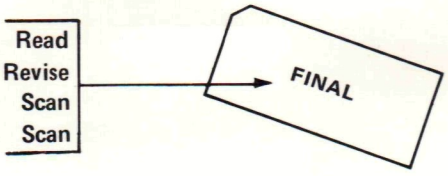
1. Set the typewriter for double spacing.
2. READ.
3. PLAYBACK.
4. CLEAR MEMORY.
5. Repeat steps 2-4 until all pages have played back.
6. Take the cards from the Stacker and file them with the copy.
7. Release NO ZONE and TPWR.

# Review and Revision Refinements

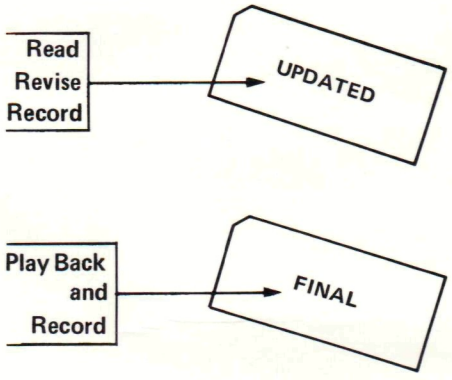


## Two-Pass Vs. Revise and Scan

Comparing the Revise and Scan Procedure:




with the Two-Pass Revisions Procedure:




you can see that in the Two-Pass Revision Procedure, the line endings and page ending decisions take place during the playback step, whereas in the Revise and Scan Revision Procedure, these decisions are made during the scanning step.

You may choose to use either revision method at different times depending on the type of document you are revising and the nature of the revisions.

The Revise and Scan method is excellent for most jobs as it saves you valuable time during the playback step. It is usually used when revising a complete document that has the same number of lines on each page.

In some instances, however, if only certain pages of a long document are revised, you may prefer to use the Two-Pass Revision Procedure. In this way you can skip pages that do not change and work only with those that do have revisions.

Also, if pages contain both single and double spaced copy or footnotes, the number of lines per page would vary. This would make it difficult to use the Scanning Procedure. The Two-Pass Procedure could probably be used more easily.

As you work with your IBM Mag Card II you will find many new and different ways of handling your different types of work.

## REVISION REFINEMENTS

In the previous exercises you have learned how to update and revise material using the Two-Pass Revision Procedure and/or the Revise and Scan Procedure.

The revisions in these exercises were fairly common, for example, inserting, deleting, etc. However, there are other changes that may occur less frequently. For example format changes, etc.

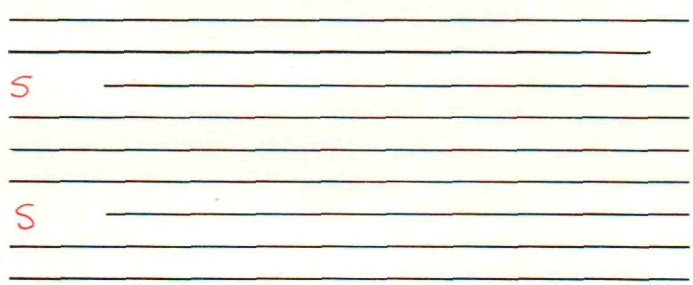
The Refinements Section shows you how to handle these changes when you are using Two-Pass Revision Procedure (pages 187-191) and also for the Revise and Scan Procedure (pages 192-201).

---

## REFINEMENTS - TWO-PASS REVISION PROCEDURE

### Changing Line Lengths

With the Two-Pass Revision Procedure, line ending decisions are made during the playback step. Therefore, it is not necessary to reset the line length when revising. Instead, insert a Stop Instruction at the beginning and end of the paragraph to be played back at the different line length.




When you play back to create final copy and final cards, the typewriter will stop at the Stop Instruction so you can make the necessary line length changes.

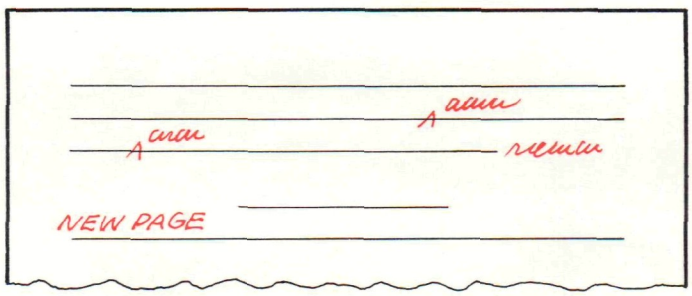
---

To review the procedure for changing the line length:

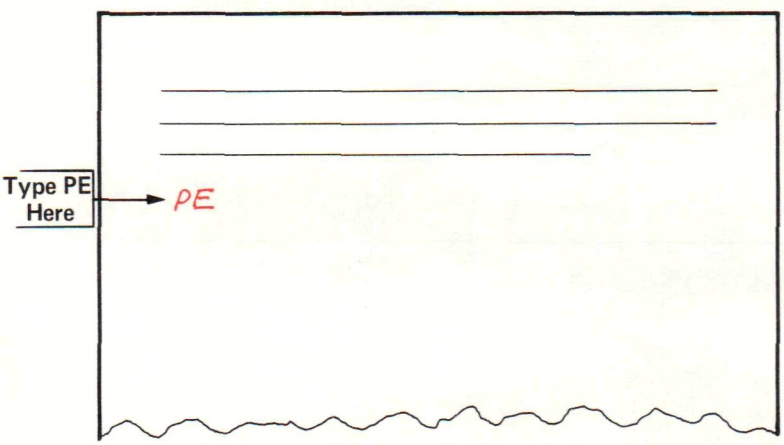
- Depress TPWR.
- Carrier return.
- Space or tab to the desired position
- Hold CODE and depress PAR ADV.
- Release TPWR.
- Roll the platen back to the line where typing will begin.

## Predetermined Page Endings

Sometimes, after a document has been typed, you may decide that you need to begin a certain section at the top of a page.




Remember, page ending decisions are made during the playback step.

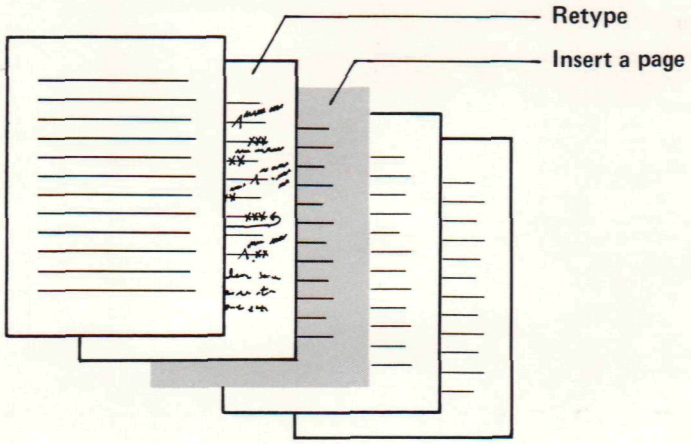



Therefore, to end a page at a particular point:

- Playback to where the page should end.
- Type a Page End Instruction.
- Depress REC.
- Insert new paper and continue playback.

## Adding or Retyping Pages

When revising a document, there may be pages that must be completely retyped or new pages to be inserted.




Before making any revisions to the document, these pages should be typed and recorded on cards.

When you come to a page to be inserted:

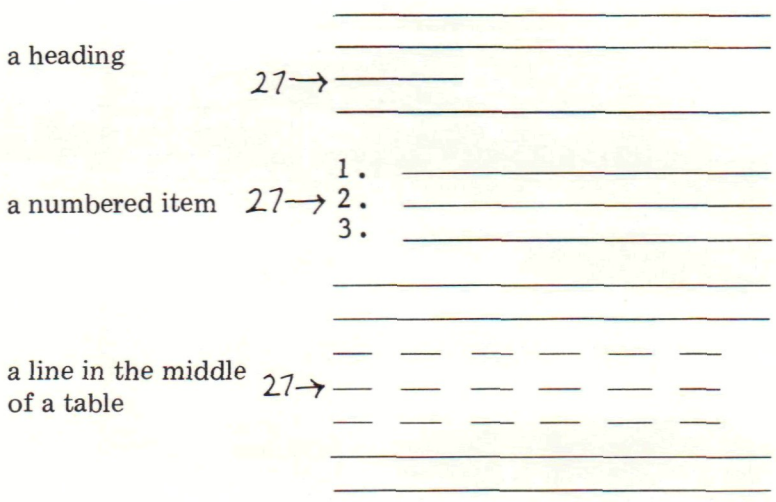
- Place the new card on top of the cards in the Stacker.

When you come to a page you retyped:

- Card Skip the original page. Remove it from the Stacker.
- Place the new card (substitute page) on top of the cards in the Stacker.

## Stopping Playback at a Point other than Line Count

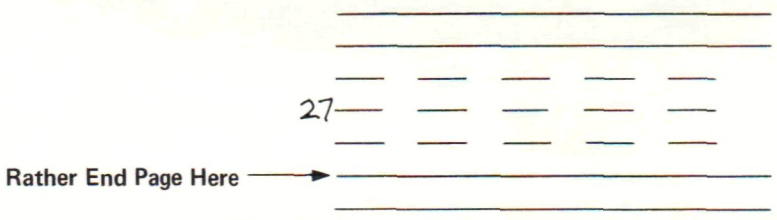
During playback there may be situations when you do not want to end the page exactly at line count.




---

In situations such as these you may wish to add lines to the page.

Example:

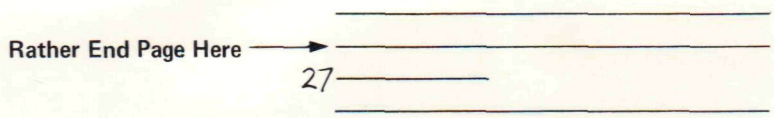



---

To add lines:

- Play by LINE to the desired position.
- Type a Page End Instruction.
- Depress REC.

Sometimes you may wish to end the page before the line where the typewriter stopped.




---

In this case, because you have already played back too far, you must replay the page.

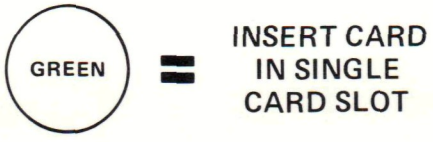
To decrease the number of lines:

- Insert new paper.
- PAGE START.
- Replay the page.
- Manually stop playback at the desired line.
- Type a Page End Instruction.
- Depress REC.

---

### Additional Cards

If the revision includes a large insertion you may need additional cards for recording. Remember, the typewriter will tell you when to add a card by turning the Green Light on Solid.




When making extensive revisions, the need to add additional cards could happen during either the revision step or the playback step.

## REFINEMENTS-REVISE AND SCAN PROCEDURE

Errors made or noticed, during hyphenation may be corrected during the scan operation.

- If you make a mistake while playing out the word in CHAR—such as playing back past the point you want to insert the hyphen:

```
15   typewri  ter   typew
```

  - Line return.
  - SCAN. The pointer will move back to the beginning of memory, rescan the text, and print the word out again.

- If you notice a typographical error in the word printed for hyphenation and want to correct it:

```
15   tpyewri  ter
```

  - Play by CHAR to the incorrect character(s).
  - Delete the character(s).
  - Type the correct character(s).
  - Continue to play by CHAR to the point of hyphenation.

- If the error is past the point you want to hyphenate:

```
15   typewri  tre
```

  - Play by CHAR to the incorrect character(s).
  - Delete the character(s).
  - Type the correct character(s).
  - Line return.
  - SCAN. This word, now correct, will again print out for hyphenation.

## Scanning without hyphens:

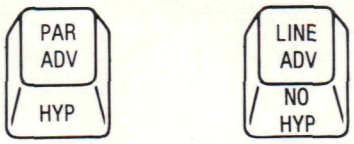
You have already learned how to play back and scan text to produce hyphenated copy. Sometimes, during the initial revisions of a project, you may wish to scan without hyphens.

When scanning without hyphens, line lengths are adjusted but the typewriter stops scanning only at the reference line.

You already know how to set line length by holding Code and depress PAR ADV.

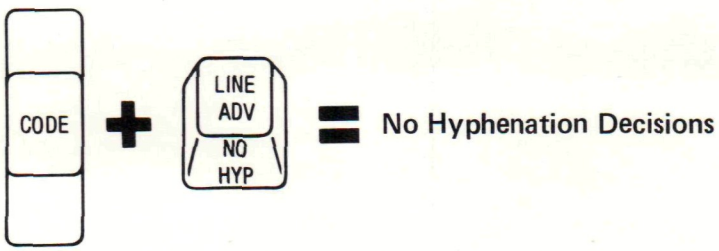
The line length can also be set by holding Code and LINE ADV.

Notice that HYP is engraved on the front of the PAR ADV Button and NO HYP is engraved on the front of the LINE ADV Button.




---

When you set the line length with LINE ADV, the typewriter will put as many words on a line as it can without going beyond the line length.




Scanning will not stop for hyphenation decisions. Some hyphens may appear in the final copy because they are part of the original text and fell within the Line End Zone when typing.

---

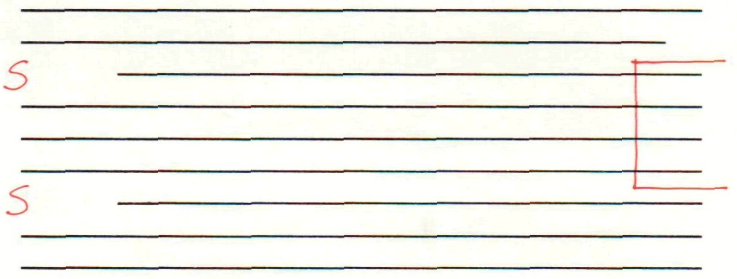
When you wish to reset the typewriter to scan with hyphens, follow the standard procedure for setting line length with the Code and PAR ADV Button.

Remember, it is only possible to scan without hyphens. When playing back, the typewriter will always stop for hyphenation decisions.

## Changing Line Lengths

When changing line length during the Revise and Scan procedure, the actual change should be made during the scanning process.

A Stop Instruction should be recorded before and after the material to be affected.



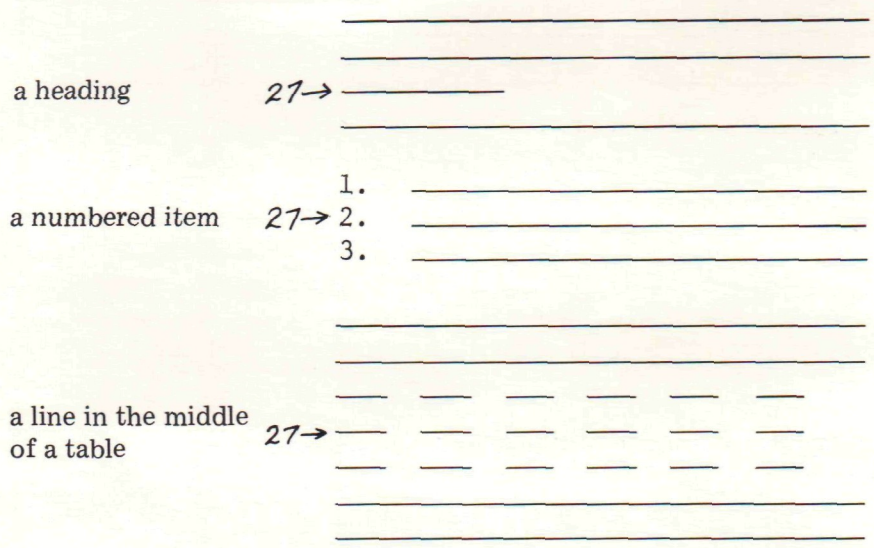

When scanning stops at the first Stop Instruction, use the standard procedure for changing the line length.

- Depress TPWR
- Carrier return
- Space or tab to the desired position
- Depress Code + PAR ADV or LINE ADV
- Release TPWR
- Resume scanning.

When scanning stops at the second Stop Instruction, use the same procedure to reset the original line length.

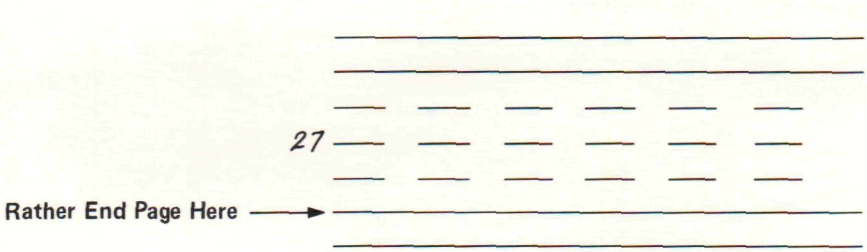
## Changing the Reference Line

During scanning, there may be situations when you do not want to end the page exactly at the reference line that has printed.




In situations such as these you may wish to add lines to the page after the reference line has printed.

Example:




To end the page after the reference line:

- Play by LINE to the desired position.
- Scan to record the text. The typewriter will continue scanning as usual.

Sometimes you may wish to end the page before the reference line.

Rather End Page Here →

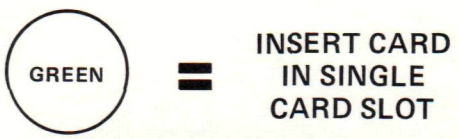
27

To end the page before the reference line:

- Line return to the beginning of the line which should start the new page.
- Scan to record the text.

## Additional Cards

If the revision includes a large insertion you may need additional cards for recording. Remember, the typewriter will tell you when to add a card by turning the Green Light on Solid.

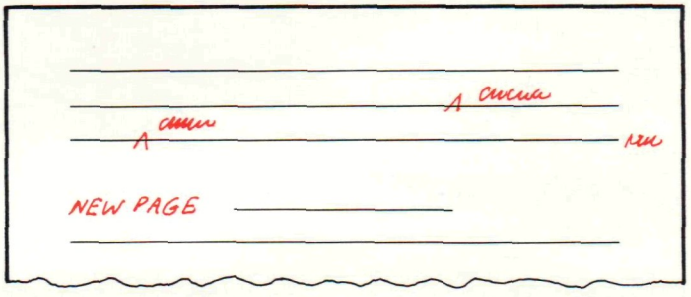



When making extensive revisions, the need to add additional cards could happen during either the revision step or the playback step.

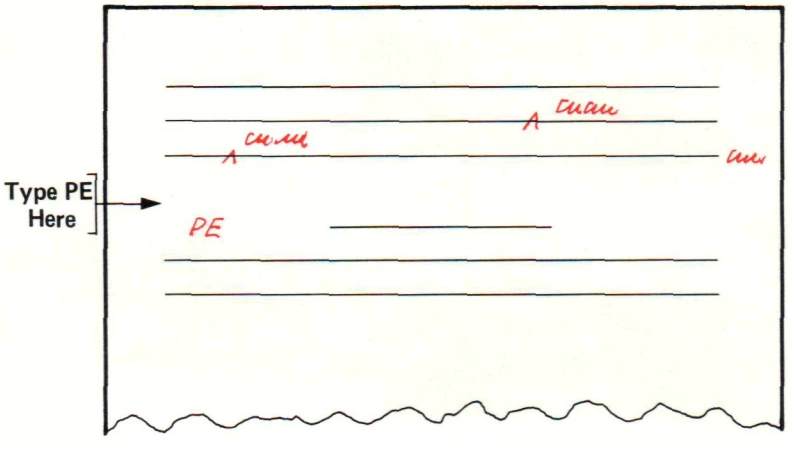
## Predetermined Page Endings

Sometimes you will know before you scan where you want the page to end.

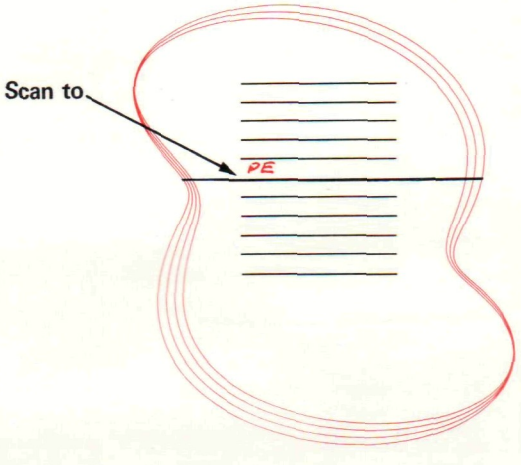
For example, on a report that is to be revised the author has indicated that a section is to start a new page:



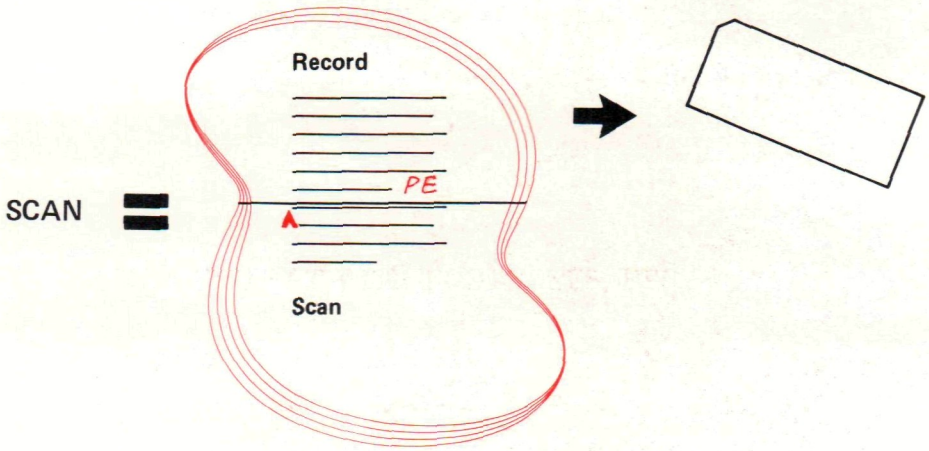

In this case, while you are making the revisions type a Page End Instruction where you want the page to end.




When you scan the revised material, the typewriter will scan to the Page End Instruction and stop—printing the line preceding the Page End Instruction as the reference line.



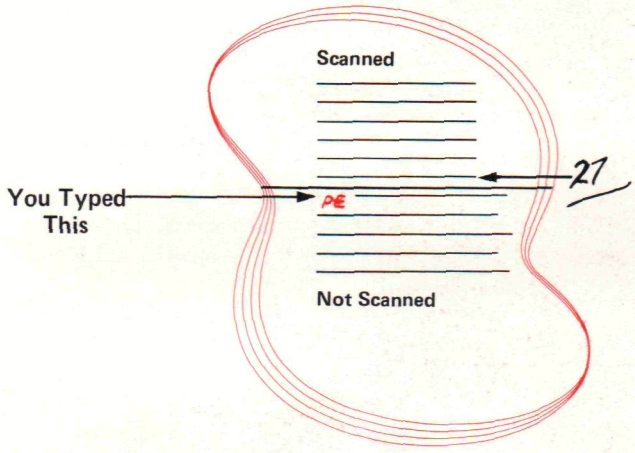
When you scan again, the typewriter will automatically record up through the Page End Instruction and continue scanning the rest of the text.




---

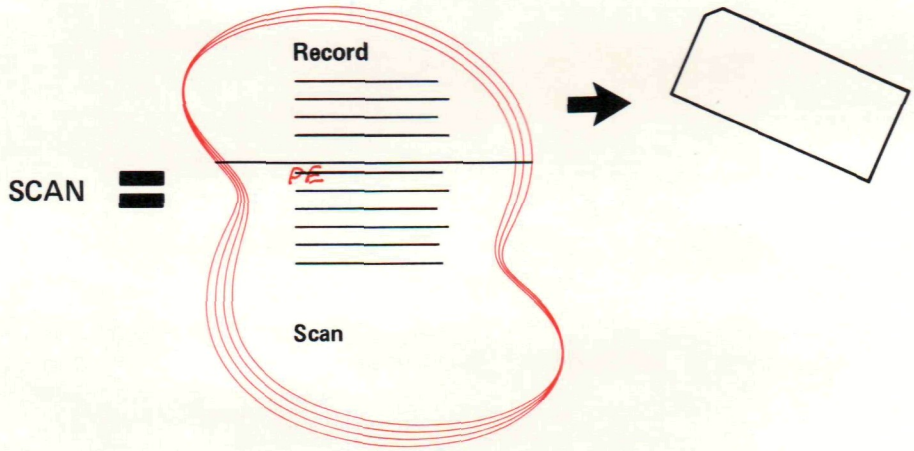
In the above example, you saw how to end a page at a certain point by inserting a Page End Instruction. This caused the typewriter to stop scanning after the Page End Instruction and print a reference line—even though line count had not been reached.

Occasionally, when you are following this procedure, the typewriter will scan and reach line count immediately before the Page End Instruction.




In this situation, the reference line is printed because line count has been reached—not because the typewriter saw the Page End Instruction.

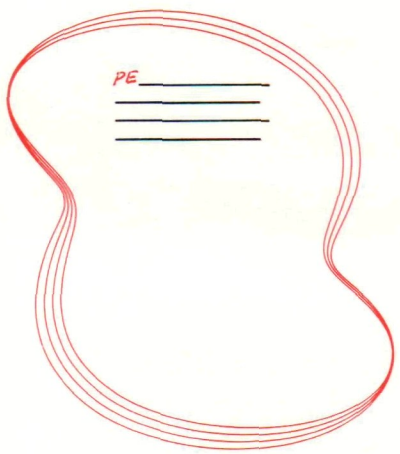
Since this is the place you wanted to end the page anyway, the next step is to scan again to record the page out of memory.




The text up to and including the line before the Page End Instruction is recorded out of memory.

---

As you know, when this second Scan Instruction is given, the typewriter goes on scanning the rest of text left in memory. In this example, however, the first thing the typewriter sees when it continues scanning is the Page End Instruction.



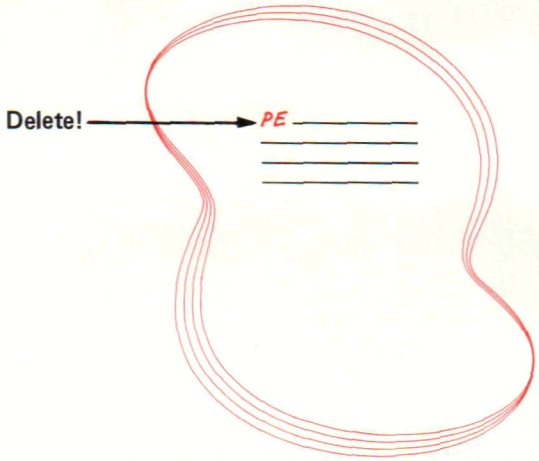

Since scanning always stops at a Page End Instruction, scanning stops immediately.

Therefore the typewriter prints an "01" on your paper indicating that scanning stopped on the first line. There is no reference line because there is no text preceding the Page End Instruction.

01 = **Scanned and ran out of text on line 1**

---

To scan the remaining material, the Page End Instruction must be deleted.




To delete the Page End Instruction:

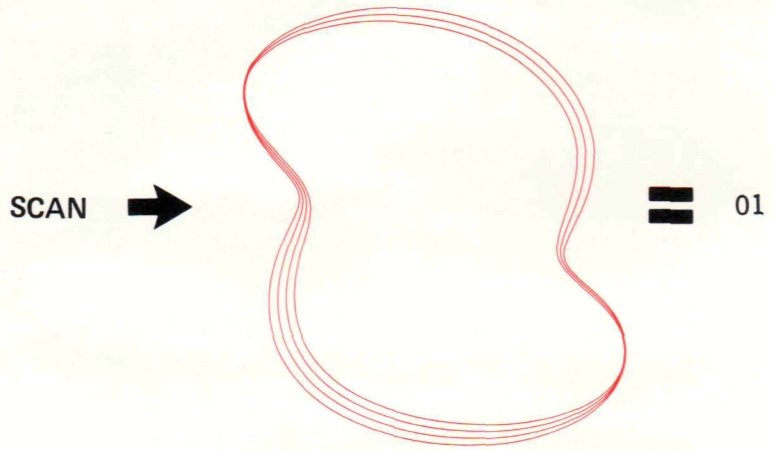
- Line return
- Line delete

Now the remaining material can be scanned.

## SCANNING EMPTY MEMORY

As just explained, an 01 printed on your paper indicates that the end of text was reached on line 1.

There is another situation when an 01 can print on your paper. If you attempt to scan when there is no text in memory, the typewriter will print 01 which indicates that the memory is empty.




Your typewriter is now "locked" in scan; you cannot enter line count while the machine is locked in scan.

> Depress TPWR. Type a line count of 27. Notice that the carrier does not return automatically after the number is typed. This is your signal that the line count was not entered.
>
> To take the typewriter out of scan, clear memory.

Practice Exercises 35 and 35-A contain many of the principles covered in the Refinements Section. You may use either the Two-Pass or the Revise and Scan Procedure in practicing these exercises.

Exercise 35 contains material you have not revised before. If you wish to practice revising it, follow the instructions below.

Exercise 35-A contains additional revisions to the Indented Project you have already revised. If you wish to practice it, turn to Page 207.

---

## EXERCISE NO. 35

In addition to assisting you to learn how to revise different types of formats, this exercise will reinforce many of your basic typing rules.

1. Type and record the material on the opposite page.
2. Insert the card in the Pack Feed Slot.
3. READ the card into memory.
4. REVISE the copy on page 206 using either the Two-Pass or the Revise and Scan Procedure.
5. Play out the revised copy to check your revisions.

MARTIN CORPORATION

CORPORATE STATUS REPORT

(Date)

This report contains only the condensed status reports from departments that concern your area.

The Budget Department is compiling figures for the last of 1971. Projections for materials, labor, and overhead are vague at this time. Complete figures will be available December 31.

Expansion of marketing emphasis in the West has put great strains on the Sales Department. It has, however, accomplished two important things:

1. Incorporation of the Northwest and Southwest Regions.

2. Consolidation of our Divisional offices into one unit operating out of the San Francisco offices.

Both these achievements should help Martin Corporation realize more profits in the upcoming year.

Activity in the Mail Department has increased 28-30 percent in the first six months of this year. Greater utilization by Sales is given as the reason. More efficient equipment to meet the work load is on order.

List of Officers

| Officer | Position | Service |
|---|---|---|
| Albert C. Smith | Chairman of the Board | 37 years |
| Harvey Carlton | President | 25 years |
| Benjamin E. Nickerson | Vice President | 21 years |
| Arthur Lee Vance | Second Vice President | 17 years |
| Kelly Albert | Secretary | 15 years |

The above information is for your use only and is not to be used outside your department. Further details and a total report from all departments can be obtained in the President's Office.

MARTIN CORPORATION

President's ~~CORPORATE~~ STATUS REPORT

(Date)

This report contains ~~only~~ the condensed status reports only from departments that concern your area.

The ~~Budget~~ Finance Department is compiling figures for the last of 1971. Projections for materials, labor, and overhead are vague at this time. Complete figures will be available December 31.

Expansion of marketing emphasis in the West has put great strains on the Sales Department. It has, however, accomplished two important things:

a 1. Incorporation of the Northwest and Southwest Regions.

b 2. Consolidation of our Divisional offices into one unit operating out of the San Francisco offices.

Both these achievements should help Martin Corporation realize more profits in the upcoming year.

Activity in the Mail Department has increased 28-30 percent in the first six months of this year; greater utilization by Sales is given as the reason. More efficient equipment to meet the work load is on order.

new page —

List of Officers

| Officer | Position | Service |
|---|---|---|
| Albert C. Smith | Chairman of the Board | 37 years |
| Harvey Carlton | President | 28 years |
| Benjamin E. Nickerson | Vice President | 21 years |
| Arthur Lee Vance | Second Vice President | 17 years |
| Kelly Albert | Secretary | 15 years |

The above information is confidential ~~for your use only~~ and is not to be used outside your department. Further details and a total report from all departments can be obtained in the President's Office.

## EXERCISE NO. 35-A

The following practice exercise contains additional revisions to the Indented Project you have already done. If you wish to practice it, you must re-duplicate Exercise Cards 7-10.

1. Load the duplicate cards in the Pack Feed Slot.
2. Revise the copy using either the Two-Pass or the Revise and Scan Procedure.
3. Playout the revised copy to check your revisions.

1. THE DISSEMINATION PROBLEM

How to get information to people who need it, as it becomes available, is a problem which has perplexed government and industry for a long time. Many organizations are discovering that when their personnel are not properly informed, they lose money. Not only do busy workers find it difficult to keep abreast of new developments, but they are often not even aware that information exists on these developments.

Furthermore, people are finding more and more that their interests overlap. The specialist of today has to draw on diversified information to solve his problems. The automotive engineer, for example, must learn about the biological and sociological effects of urban air pollution due to automobile exhaust fumes. How is he to gather the needed information, ~~however~~, if the automotive trade journals which he receives do not cover the effect of noxious gases on the human body or on urban life as a whole?

new page

The information dissemination problem is not restricted to areas as large as the automotive industry: medium-size businesses are also facing it with great concern. For them too, it is no longer adequate to attached a routing slip to all new material and trust that it will reach all those involved, and only those involved. Management at all levels is being subjected to an unending stream of both internal and external literature, including reports, periodicals, books, specifications, and so forth. Time is being wasted in every department as personnel search for needles of information in haystacks of unwated material.

## 2. THE SDI SYSTEM

To break through the steadily thickening information barriers, and prevent this critical situation from becoming worse, ~~we have~~ the company has developed a system that delivers information to the right people at the right time. Called "selective dissemination of information" (SDI), it enables personnel ~~are able~~ to absorb all new information on their respective subjects of concern. The system may save days, or even weeks, of unnecessary effort and possibly result in a considerable leap ahead of competitors.

The SDI system is the mechanization of the answer to two questions which companies ask themselves:

a. Who in our organization should receive what information? b. How can we help them absorb the abundance of material we have to distribute?

## 3. DOCUMENT AND RECIPIENT PROFILES

To look closely at the first question, assume that a color TV engineer develops such a radical improvement in picture circuitry that the manufacturer decides to curtail production of the current model until the design change is made. Instantly they begin an abundance of correspondence, memos, engineering drawing, purchase orders, etc. The engineering change causes a virtual upheaval in color TV set production and sales. Should a single individual or group be lacking the proper information, it could mean many thousands of dollars in wasted time and even more in color TV set sales.

Narrowing the problem to just one department's operation, the photograph ~~section~~ department has had a specific request from the Sales Department for a picture of the new color TV. How do they know that the Advertising department also needs one for a press release? If the photograph department's problem can be solved, perhaps the solution can be applied to the overall dissemination of information problem in the TV plant.

Essentially, the job of the photograph department is to see that all necessary pictures are taken, and potential users ~~wither~~ e.g. receive them or know they are available. The necessary types of pictures include identification photographs of new employees, publicity photographs at meetings of the board of directors, new product photographs, assembly photographs for service literature and for certain catalog illustrations, etc. The potential users are the various individuals or departments that regularly need one or another type of picture. ¶ If the photograph department creates a profile to characterize each picture as to specific subject and general type and another profile to characterize each potential user as to the type of picture regularly required, then, by comparing the two sets of profiles, the department can notify the right people about the photos. ¶ The profile technique can be applied to the entire information dissemination problem in the organization. That is, a profile can be prepared for every kind of document and for every potential user. Each profile is made up of characteristic terms called "keywords", a word selected on the one hand from the language of the document, as well as from the specialized vocabulary of the user.

4. DOCUMENT ABSTRACTS

With this control established over who should receive what information, the dissemination problem only reaches partial fulfillment; still a matter of concern is the abundance of material generated daily, in the form of periodicals, internally written reports, production

schedules, specifications, etc. Since recipients are unable to read ~~at~~ it all, many companies have concluded that the only way to get all the essential information to people in such a form that they can absorb it, is to condense the material to about ten percent of its original length and distribute the resulting abstracts instead of the complete documents.

~~A condensing technique can be used to increase the cources of information for each individual, and at the same time reduce the volume of literature which he must read, thus enabling him to be better informed while studying less.~~

5. SELECTING DOCUMENTS

In a typical SDI system using data processing machines, new documents are screened by an editor who is thoroughly familiar with the needs of the organization. If ever some doubt arises as to the value of entering a particular document into the system, it is better to enter it rather than risk losing important information.

# Special Card Handling



## SPECIAL CARD HANDLING

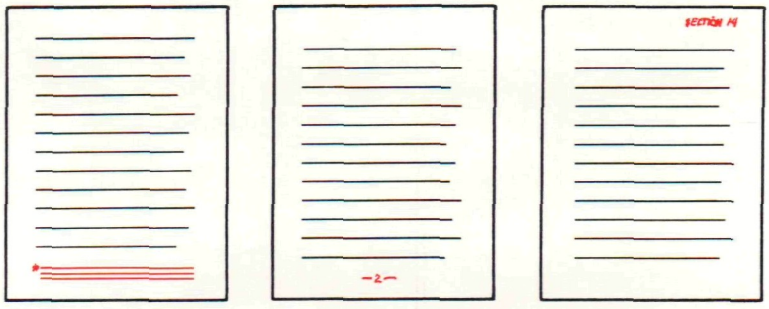
In this section you will learn how to handle:

- Projects with footnotes, page headings, and page numbers.
- Selected page revisions.
- Saving original cards.
- Standard paragraphs.
- Unattended printing.

---

## FOOTNOTES, PAGE NUMBERS, PAGE HEADINGS, ETC.

Since page endings change whenever a document is revised, footnotes, page numbers, page headings, etc., are not recorded. Instead, these items are typed manually and appear only on the final typewritten copy.



---

## EXERCISE NO. 36

Use the text on the following pages to practice typing a project with footnotes and heading.

Instructions:

Type and record the exercise. Remember: do not type the footnote or the page headings.

## AN ECONOMIC ABC: GROSS NATIONAL PRODUCT

What makes the United States a strong and powerful nation? One of the basic reasons--and there are others--is our insistent reliance on the importance of the individual, whether he works alone or whether he works on a team. From this basic concept stems our free enterprise system, a system which has given us the best standard of living the world has ever known.

But do you know what makes this economic system of ours work? Do you know its pattern? Do you know what part the individual plays in this system?

And let's begin with you. Let's say that you are Elizabeth Smith, Mrs. John Smith, whose husband is the owner of a shoe store--Smith Footwear of Elmwood, Pennsylvania. You have two children--David, who is fourteen and a freshman in high school and Joan, who is twelve and in the seventh grade.

Four years ago you and John bought a new home, for which you had been saving a long time. When the down payment of $2,500 was made, it took most of your savings, so you had to be satisfied to keep for at least two more years the car which you had already driven for a long while.

But the family had decided that a home of its own was more important than anything else--except, of course, a college education for David and for Joan. Savings have been accumulating toward that purpose since the children entered kindergarten.

---

Taken from: Do You Know Your Economic ABCs?, Office of Public Affairs, U. S. Department of Commerce.

The mortgage payments for the house have been burdensome at times, but they have been arranged so that with careful management the house should be yours--all yours--by the time John retires.

When the youngsters go off to college, you may decide to go back into teaching to help speed mortgage retirement, but that need not be decided now.

OUR FREE ENTERPRISE SYSTEM

These decisions you and John have made are examples of our economic system at work. We call it a free enterprise system. What do we mean by enterprise? Webster defines enterprise as "an undertaking which involves activity, courage, energy . . .," and certainly you know that when John decided to buy his own shoe store from its former owners ten years ago, it took every one of these qualities. Remember the long talks you two had about it?

What do we mean by enterprise?

And what do we mean by free enterprise?

No one told John he had to remain as manager of the shoe department at the Atwood Emporium. You and he alone decided to go into business for yourselves. No government decree now tells him that he must hire certain salesmen, charge certain prices, sell certain kinds of shoes. No one tells him that he must purchase his shoes from this or that manufacturer. Nor does anyone tell the Petersons and the Lands and the Bosens and the Spaldings that they can buy shoes only from the Atwood Emporium.

Page 3
AN ECONOMIC ABC

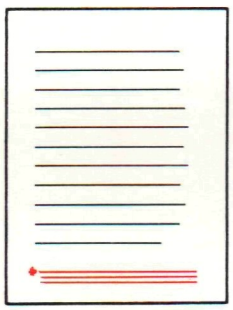
Within the framework of a free enterprise system, John himself chooses his occupation, his salesmen, his price range, his merchandise, and his suppliers. Customers are free to choose from whom they will buy shoes.

## PLAYING BACK A PROJECT WITH FOOTNOTES, ETC.

Footnotes, page numbers, page headings, etc., may be typed at the time the page is played back, or as a separate step when final typewritten copy has been produced.

If you decide to type the footnote (or page number) as you play back each page:

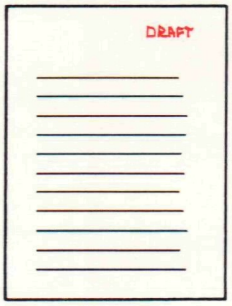
- Play back the final copy; remember to leave enough space at the bottom for the footnote.
- Type a Page End Instruction and record the page.



Then follow these steps to type the footnote:

1. Depress TPWR.
2. Type the footnote. (Remember to use the Error Correct Backspace to correct typographical errors.)
3. Return the carrier to the left margin.
4. Release TPWR.
5. Continue playback.

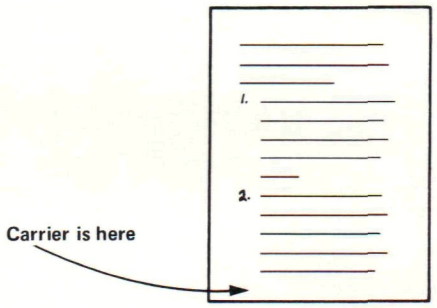
To type a heading or page number at the top of a page:




1. Insert paper.
2. Depress TPWR.
3. Type the heading (or number).
4. Return the carrier to the left margin and position the paper where the first line is to play back.
5. Release TPWR.
6. Play back final copy.

---

With indented material, the typewriter "remembers" the temporary left margin from one page to another. Therefore, when you stop at the end of a page, the carrier may be at a temporary left margin rather than at the actual left margin.




To type a footnote or heading at the actual left margin:

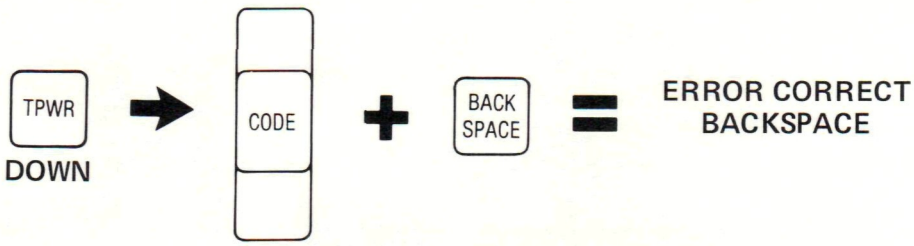
1. Depress TPWR.
2. Look at the margin scale and note the position of the temporary left margin.
3. Code carrier return to cancel the temporary left margin. The carrier will return to the actual left margin.
4. Type the footnote or heading.
5. Code tab to reset the temporary left margin.
6. Release TPWR.
7. Continue with the project.

When manually typing material on the final copy, remember to depress and lock down the TPWR Button. This prevents the text you type from going into memory.




---

Remember, if you make a mistake while typing the footnote, you can backspace and retype to correct. To do this, hold the CODE Button while you backspace.




The character typed after the Error Correct Backspace will print with the white tape; the carrier will not move forward.

---

## EXERCISE NO. 36
**Continued**

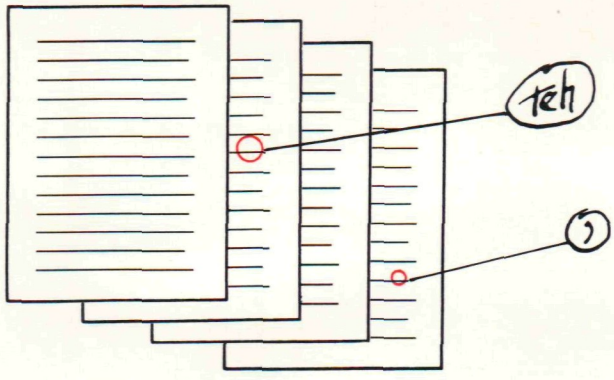
Follow these steps to play back:

1. Insert paper.
2. Read the first page and play it back.
3. Manually stop playback at the end of the page. Type a Page End Instruction.
4. Record the page but do not remove the paper.
5. Depress TPWR.
6. Type the footnote. If you make a mistake, use Error Correct Backspace to correct.
7. Insert paper for the next page.
8. Type the page heading.
9. Carrier return and position the paper for playback.
10. Release TPWR.
11. Play back the next page.
12. Read the next card.
13. Type a Page End Instruction; record the page.
14. Repeat steps 7-13 to complete the exercise.

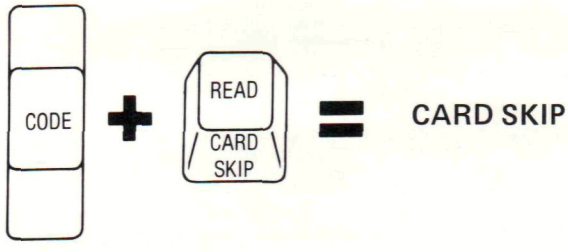
THE CARDS FROM THIS EXERCISE CAN BE PLACED IN THE CARD TRAY; THEY DO NOT NEED TO BE SAVED.

## REVISING SELECTED PAGES

Some documents may come back with very minor revisions—one character to change on this page, a misspelled word on another page.




Earlier, you learned how to card skip to bypass pages without revisions. Card skip is used also when you are revising selected pages.




Changes that do not affect line endings or page endings are made during playback using the following steps:

1. Depress NO ZONE.
2. Type a line count of 00.
3. Use card skip to locate the page with the change:
   - If pages are not numbered, turn the first page of the document; card skip. Turn the next page; card skip again. Remember: you must card skip two times for a two-card page.
   - When pages are numbered, locate the first page with changes; card skip the appropriate number of times. (For example, if the first revision is on page 8, card skip seven times.)
4. Read the page to be changed.
5. Play back to the error.
6. Make the correction.
7. Play back to the end of the page.
8. Record the card.
9. Continue to card skip and correct in this manner until all the pages (and cards) are correct.

## EXERCISE NO. 37

Use this exercise to practice revising selected pages.

Follow these steps:

1. Depress NO ZONE.
2. Type a line count of 00.
3. Place the cards from Exercise No. 32A in the Pack Feed Slot.
4. Use card skip to locate the page with the change.
5. Read the page to be changed into memory.
6. Play back to the error.
7. Make the correction.
8. Continue playback to the end of the page.
9. Depress REC.
10. Repeat steps 4-9 until all the pages have been corrected.

## MANUFACTURING COSTS

A manufacturing company incurs costs in accumulating its productive resources, resources which include money, materials, machinery, and manpower. Of these four M's--all of which are necessary to keep a business operating--money is obviously an initial requirement.

### Raising Capital

Perhaps you have asked the question: Where does all the money come from which keeps our American business running? If you have never been involved with a large company, you would need to investigate this.

There are two sources of corporate funds: external and internal. The terms hint their meaning. Sources of borrowing money outside the business are called external; sources of borrowing money inside the business are called internal.

Let's talk first about external sources of funds and let's talk about them in terms of the Mandor Corporation's beginning. This company began in 1895 when a young man, Glen Mandor, decided that he could earn more money by building and selling a washing machine than he could earn by continuing to work as a carpenter. He reasoned that if he could build such a machine, it would help housewives perform the family laundry tasks in better fashion than by the use of the washboard and wooden tub. If this were so, there would be a demand for such a product. Should he risk the cost of finding out? Here was the profit incentive again.

He built a model, tested it out in his own woodshed, corrected its faults, and then asked several of his neighbors to test it. They assured him that he had built a good product. All of which was good news but he had to have money to launch the business, and he had to have it from external sources, for he had only a limited amount of money--and some of that he had already spent on building his model.

There are two kinds of external sources to which an entrepreneur can turn: long-term and short-term. The names tell you that long-term sources permit a longer time for repayment than do short-term sources.

A business usually obtains long-term capital in three ways: (1) through the mortgaging of fixed assets, such as plants and equipment; (2) through the sale of bonds; and (3) through the sale of stocks. When a business obtains money through mortgages and bonds, it undertakes a legal debt on which interest must be paid each year, even in years where there are no profits.

On capital raised by the sale of stocks there is no such legal obligation incurred. Only when a company earns profits does it need to pay dividends to its stockholders. When, for example, John purchased a new issue of stock from the ~~Keim~~ Klein Corporation last year, the corporation did not undertake a legal debt to John. Rather, John risked his money on the belief that the firm would operate profitably.

As a stockholder he was helping to provide "equity" capital, and as a part owner of the firm, he would receive a return on his investment if the firm succeeded. This purchase of stock has given him a voice in the decision of "his" firm's management when he meets with other stockholders at annual meetings.

But back to the Mandor Corporation and its need for external funds. Young Glen knew that he would need a plant in which to build his machines and he also knew that once he had built the plant, he could mortgage it as a fixed asset. But to whom could he turn to raise the initial money to build the plant?

His problem was solved in two ways. His uncle, Mr. Calvert Mandor, lent him money to build the plant and three of his neighbors offered to buy stock in the company. All five men anticipated a successful company with profits; even so, they were assuming risks in the venture and each knew it. Glen was fully aware that he would have to meet interest payments on the mortgage and that all of his stockholders would expect dividends on the stocks they had bought; but as an entrepreneur seeking profits, he had to assume the risks involved.

A business usually obtains short-term capital from banks and other lenders, capital on which it pays interest. Such short-term loans are generally repaid within one year.

Because Glen would need money to buy equipment and to pay his employees as soon as they began working and because he would incur these costs before his new machines could produce revenue, he and his uncle talked with Mr. Thomas Ramsey, president of the local bank, about borrowing these necessary funds from the bank. (Usually, the first source for short-term capital is a bank.) Since Mr. Ramsey thought well of the new venture, for it would bring additional profitable business to the community and to his bank, and since Glen had established an excellent record of repaying money when he had borrowed funds to build his home some years before, Mr. Ramsey was willing to lend him the necessary money.

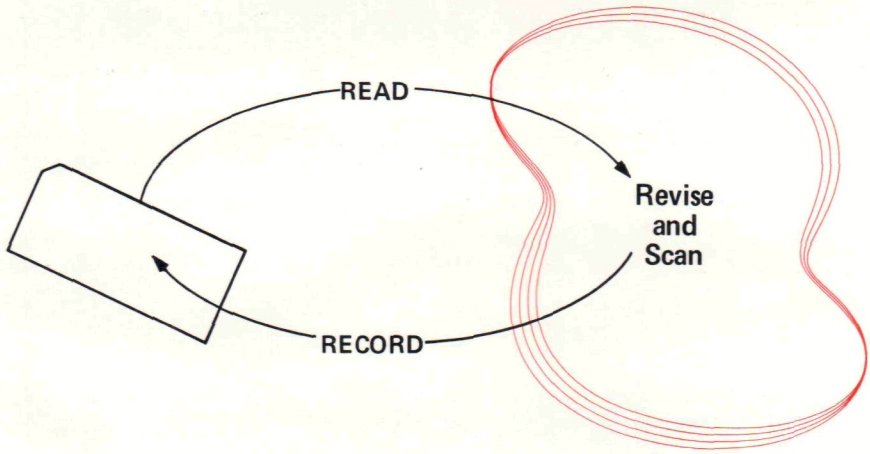
It is obvious then that one of Glen's heaviest costs in the beginning of his business venture was the interest and principal payments he had to pay on his borrowing. And his experience is that of many American entrepreneurs who risk the assumption of debts in anticipation of future profits from a successful business. It was not until the Mandor Corporation became a successful enterprise that it became concerned with internal funds, for until business is operating profitably, it cannot have internal sources on which to draw.

There are two sources of internal funds. The first provides funds from the retained profits of the firm. These are funds which are left over after all costs are met and after dividends to stockholders are paid. They may therefore be plowed back into the business. The second source of internal funds comes from what is called depreciation of assets.

When we add up the corporate funds derived from the external and internal sources of American business for a single year, we can get some idea of what is involved in the financing of American business.

## SAVING ORIGINAL CARDS

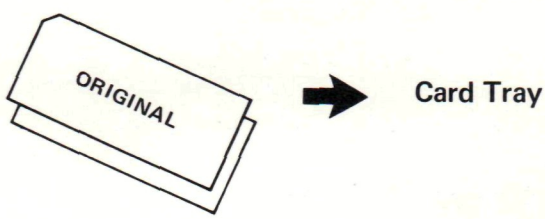
Normally during revision you do not need to save the cards containing the original text. So you read them into memory from the Pack Feed Slot, make the revisions, and record the final text on the same card.




If you want to revise the text but also maintain the original set of cards, a different procedure is used.

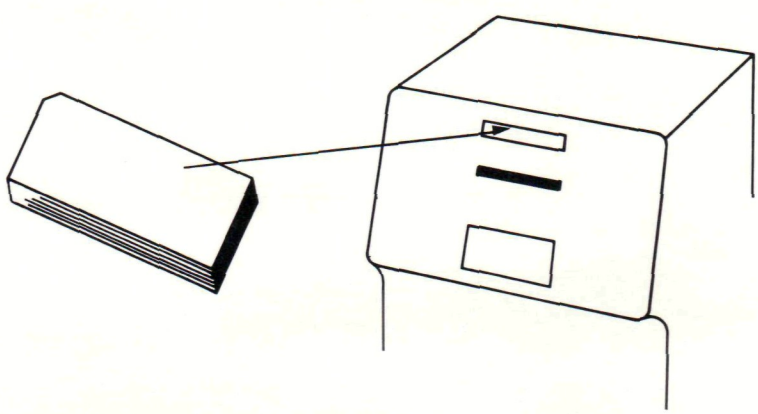
---

To save the original cards, place them in the card tray on top of the Card Unit. Place the first card on the top of the stack.*



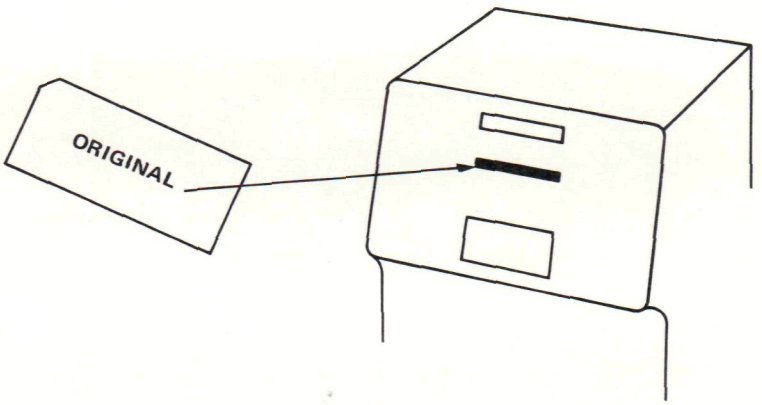

---

Cards for recording are placed in the Pack Feed Slot.



*If the original cards were created on the IBM Mag Card II, place the stack upside down in the card tray. The first recorded page will be the card on the top of the stack.

To revise the text, the first page is read into memory through the Single Card Slot.* The card ejects when reading is complete. The ejected card is placed in the other side of the card tray, keeping the cards in the same order.




When the revisions have been made, the text may be scanned and recorded on a card fed from the Pack Feed Slot.

---

## EXERCISE NO. 38

Use this exercise to practice revising and saving the original cards.

Follow these steps:

1. Take the cards from Exercise No. 23 and place them in the card tray.
2. Mark your playback copy with the revisions indicated on the following pages; also mark any errors you did not correct.
3. Place blank cards in the Pack Feed Slot.
4. Depress TPWR. Enter line count; release TPWR.
5. Read the first page into memory through the Single Card Slot. Remove the ejected card and place it in the other side of the card tray, keeping the cards in the same order.
6. Revise the page.
7. Scan the text in memory.
8. Read the next page.
9. Continue with steps 6-8 until the revisions are completed.

SAVE THE FINAL CARDS IN THE STACKER FOR PLAYBACK. RETURN THE ORIGINAL CARDS TO THEIR FOLDER.

*Remember, there may be some pages recorded on two cards. Generally, you will be able to recognize a two-card page because of the length of the typed copy.

## INTERPLAY OF DOMESTIC SEGMENTS

It now remains for us to consider the interplay of the economic activities of the three domestic segments of our economy: consumers, business investors, and government, which--together with our country's foreign trade--helps to determine our economic growth. Examples will aid in illustrating this interplay.

### The Consumer

Let's begin with an example from the point of view of the consumer. Suppose your sister Gertrude and her husband, Walter Rommel, decide to move their family from a row house in a city to a new house in the suburbs a few miles away. ~~Only one family and its purchases are concerned. But~~ if hundreds or if thousands of families throughout the country were to decide to make the same sort of move over the course of the year, a chain reaction would be set off in our free enterprise system and would be reflected in our gross national product.

In the first place, the demand for suburban houses would ~~go up~~ increase and that for row houses would ~~go down.~~ decrease. Banks would lend money to the new owners to finance their purchases of new homes. These new owners would become ~~potential~~ buyers ~~ordinarily through retail stores~~ of such final goods as household furniture, garden furniture, lawn mowers, sandboxes, wading pools, fencing, and the like.

To keep on hand stocks of such products, the retailer would order in greater quantity from the wholesaler who in turn would order in greater quantity from the manufacturer. The manufacturer would find need for a greater supply of raw materials and probably for new equipment.

Presently ~~Patently~~ there would be need for more architects, carpenters, brick layers, truck drivers, and assembly line workers for the new equipment. There would be need for more stores to supply the needs of new home owners and with these stores would come a contingent of new clerks. There would be need for telephone linemen and bus drivers and garage mechanics and so on and so on.

And what has all this to do with our American economy? ¶ It illustrates that consumer trends in purchasing help to determine the economic trends of our country.

But what determines whether the consumer will buy? What determined whether you and John would buy a car four years ago? It was your decision to make your down payment on the house that kept you out of the car market at that time. Suppose every one in your vicinity had determined on your line of action. How long could your town have kept its car sales companies in business? And suppose every one in your vicinity had determined as you did to build a new home. What an upsurge of activity there would have been in the construction industry. Of course, such suppositions <u>are</u> suppositions; ~~for~~ families do not get together and plan such a ~~line of~~ procedure.

However, let's take an actual example of the impact which a trend in consumer buying <u>can</u> have on our business output. The decision of the American consumer to acquire television sets placed in motion a series of actions.

In 1950, out of 42 million households only 5 million had acquired television sets. Here was a jump from 12 percent of all households to 92 percent of all households who had purchased television sets. The number of television stations increased from 107 in 1950 to 583 in 1965, an increase of over 545 percent. Revenue jumped from $106 million in 1950 to almost $1.8 billion in 1964, an increase of over 1,700 percent. Here was growth indeed. All along the line, new jobs and services and final goods came into being. As

a result, the gross national product, as far as this consumer buying trend was concerned, grew proportionately.

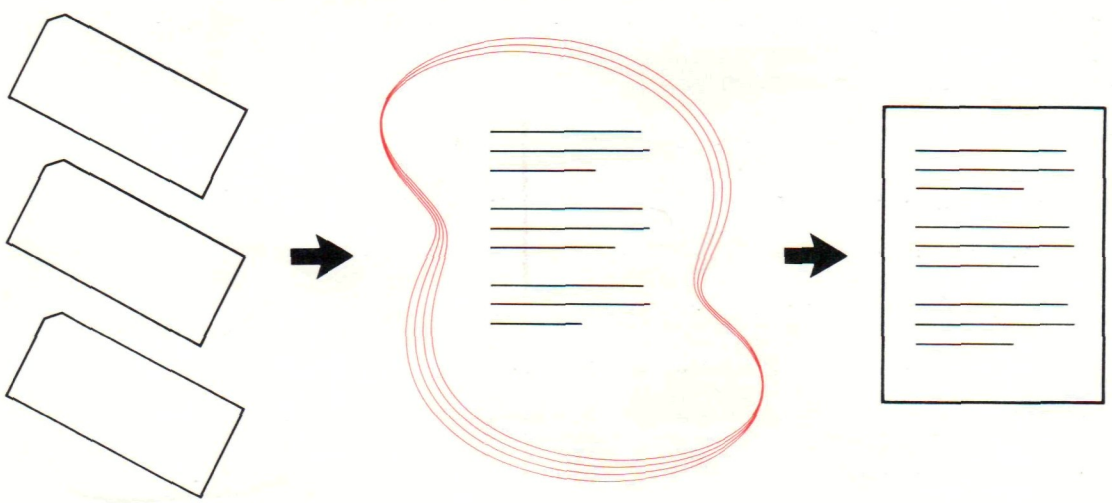
The action of consumers then has a direct bearing on the economic growth of our country. If the consumer--and that means each of us--is willing and able to spend more because he is confident that his job and income will continue and because he is attracted by the appeal of certain products, he contributes to the growth of the ~~GNP. So much for the consumer.~~ Gross National Product.

## STANDARD PARAGRAPHS

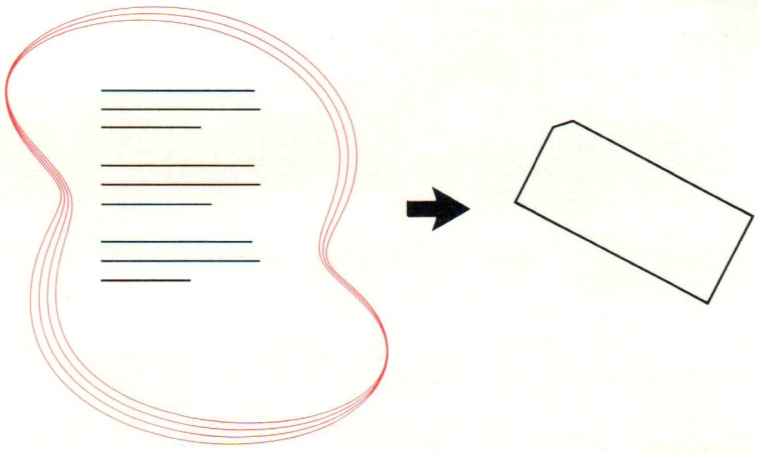
Form letters, engineering specifications, medical reports, legal briefs, monthly reports, and periodic statements are examples of documents frequently compiled from standard paragraphs.

Each paragraph is recorded on a separate card and stored in an easily accessible file.

To produce the final document, the appropriate cards are selected and read into memory for playback.



When playback stops, the completed page may be recorded on a card if necessary.

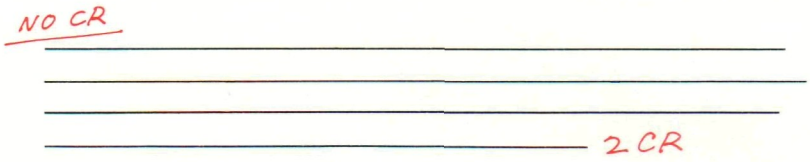


---

The following procedures for typing the standard paragraphs and playing them back to create the final document are a combination of steps you have already learned.

### Typing the Standard Paragraphs

Type each paragraph using the following format:



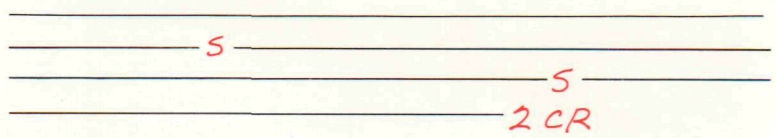

You will notice that there are no carrier returns preceding the first line of the paragraph. The carrier returns separating paragraphs are typed at the end of the paragraph.

---

Record each paragraph on a separate card.



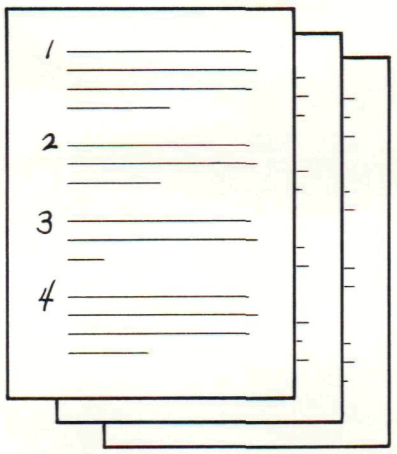
If the paragraph contains variable information, type a Stop Instruction where the information is to be inserted.




Playback will stop at the proper place for you to type the variable information.

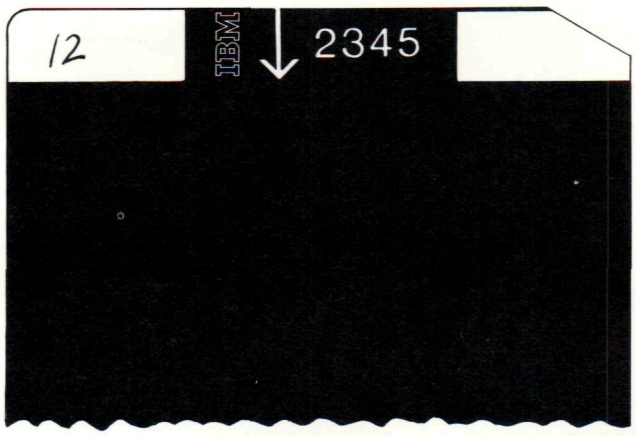
---

Prepare a notebook (or file) containing a playback of each standard paragraph. Number each paragraph, or assign some coding system, so that the author may request the paragraph by number.




---

Write the number (or code) of the paragraph in the space provided on the magnetic card and file the cards sequentially in your Card File.



## Playing Back the Final Document

Follow these steps to play back a document from standard paragraphs:

1. All buttons on the typewriter should be up; release any that are down.

2. Select the cards containing the paragraphs for the first document. The cards should be in sequential order with the first card on top.

3. Insert paper in the typewriter and type any variable information, such as date and inside address on a letter. Remember: as you type, if you make an error simply backspace and retype—the typewritten copy will be corrected.

4. Read the first card into memory through the Single Card Slot and immediately depress AUTO to start playback.

5. When the first card ejects, remove it and read the next card. Continue in this manner until all the cards for this document have been read. If playback stops for a hyphenation decision while you are reading in the cards, make the decision, start playback again, and continue reading in the cards.

6. Replace the first group of cards in the card file.

7. While the first document continues to play back, select the next group of cards.

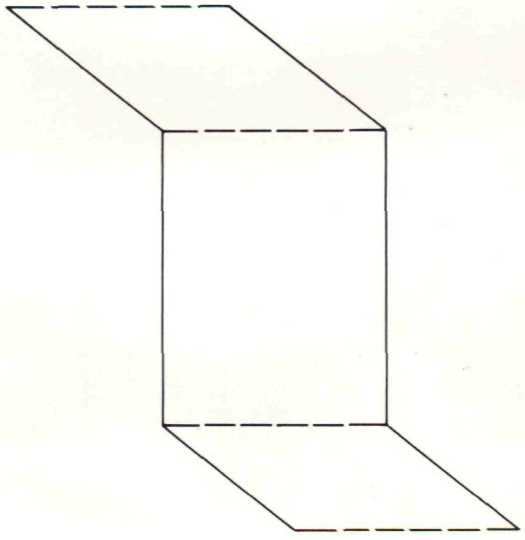
8. When the first document has played back, either depress REC, or type a Clear Instruction before reading the first card of the next document.

9. Continue to follow these procedures until all the documents have been played back.

10. Remember, if there are variables to be inserted, playback will stop.

## UNATTENDED PRINTING

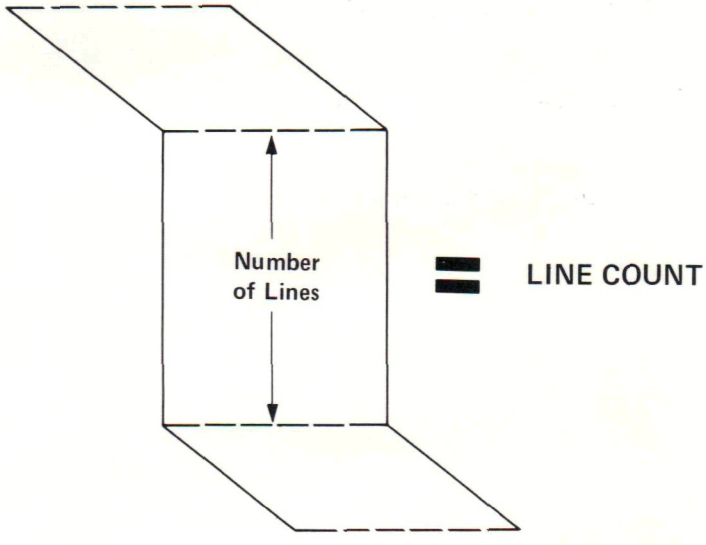
If you use continuous paper in your typewriter, you may play back a stack of final cards completely automatically.*



With unattended printing, each card is fed, read, and stacked. The paper automatically indexes to the same starting position at the top of each page.**

---

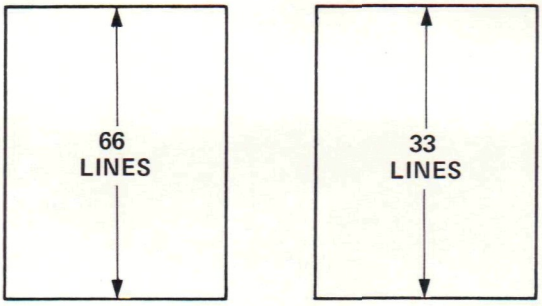
Automatic indexing between pages is controlled by line count. In this case, the line count value represents the total number of lines that will fit on a page—not the number of printed lines.




*Some jobs are not suited for unattended playback. For example, jobs which have:
- Required element changes.
- Single and double-spaced copy on the same page or within the same document.

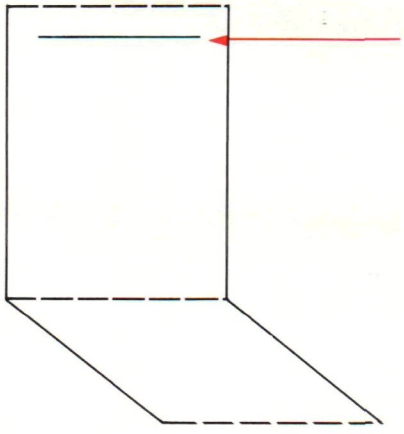
**If the first line of text on the title page begins at a different point from the succeeding pages, be sure there are enough carrier returns to position the first line.

When the line space lever on the typewriter is set for single line spacing, the line count must be 66; type a line count of 33 when the typewriter is set for double line spacing.*

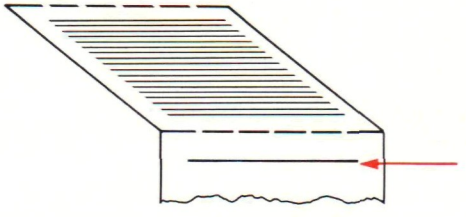



Single Line Spacing  Double Line Spacing

For unattended playback of final cards, the paper is positioned where the first typed line of each page is to appear.



When the first page has played back, the typewriter will automatically index to this same position to begin the next page.




*The number of lines from the top to the bottom of a sheet of paper is dependent upon the ratchet in the typewriter. The standard ratchet in the IBM Mag Card II (27-tooth) provides six lines to the inch, giving 66 single-spaced lines to an 11-inch sheet of paper. Six lines to the inch is provided also by the 54-tooth ratchet on IBM Mag Card II Typewriters equipped with the Reverse Index Feature.

Sometimes a special ratchet has been ordered to provide different vertical line spacing. If your IBM Mag Card II has a special ratchet, you will need to determine the number of carrier returns per inch. Then, multiply the length of your paper by this number to determine your line count entry. The result of the multiplication must be a whole number to give the correct vertical spacing during unattended playback.

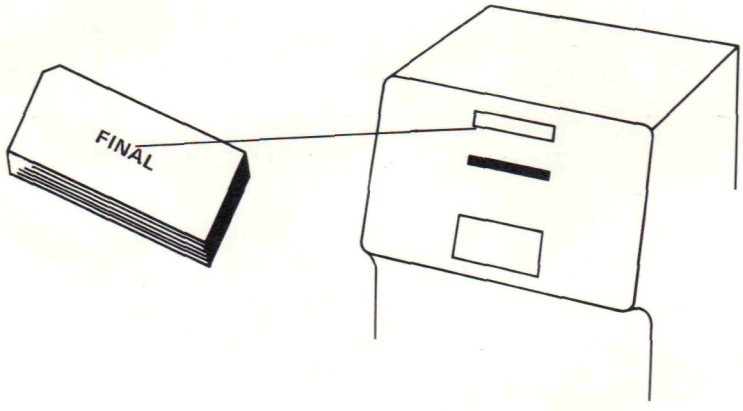
Since the cards being played back are final (line ending and page ending decisions have been made), the NO ZONE Button is locked down. Remember, with NO ZONE down, line endings do not change.




**DOWN**

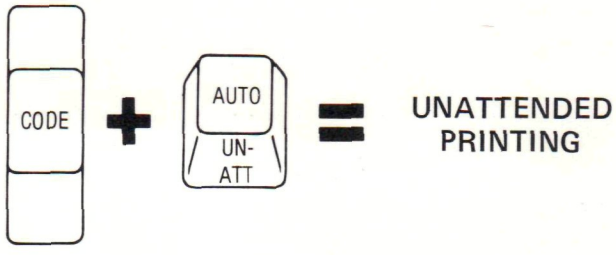
---

The cards are placed in the Pack Feed Slot.




---

Unattended playback is started by holding the CODE Button while depressing AUTO.




**UNATTENDED PRINTING**

Code AUTO causes the typewriter to:

- Read the first page into memory.
- Eject the card into the Stacker.
- Play back to the end of text.
- Index the paper to the next page.
- Clear memory automatically.
- Read the next page.

Playback will continue until all the cards have been read and played back. During unattended printing, Stop Instructions are ignored; however, playback will stop if the ribbon runs out. You must replace the ribbon before unattended playback can continue.*

*If your IBM Mag Card II is equipped with the End-of-Paper Shut-off, playback will stop just before the end of the paper. Playback is limited to one line at a time until new paper is inserted and unattended printing resumed.

To interrupt unattended printing:

- Depress LINE, WORD, or CHAR/STOP.

To restart:

- Code AUTO.

To stop unattended printing at the end of a particular page:

- Wait until the page has started to play back.
- Remove the cards from the Pack Feed Slot. The typewriter will play back the page, index to the next sheet, and stop. The memory is cleared automatically.

To resume unattended playback:

- Place the cards in the Pack Feed Slot.
- Position the paper at the first line.
- Code AUTO.

---

## EXERCISE NO. 39

Follow the steps below to play back Exercise No. 38 unattended.

1. Insert draft paper.
2. Depress TPWR and NO ZONE.
3. Type the line count of 33.
4. Release TPWR.
5. Place the final cards from Exercise No. 38 in the Pack Feed Slot.
6. Insert continuous form paper and position it where the first typed line of each page is to appear (that is, one inch from the top edge).
7. Code AUTO to start playback.

Decimal Tab



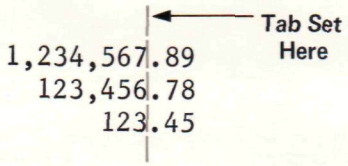
If your work looks like this:

| | | | | | |
|---|---|---|---|---|---|
| 1,027 | 183,664 | 9.9 | 22,969 | 7.5 | 33 |
| 423 | 35,695 | 2.5 | 5,503 | 1.8 | 675 |
| 1,088 | 63,749 | 4.5 | 9,393 | 3.1 | 675 |
| 5,191 | 15,898 | 1.2 | 6,551 | 2.2 | 2,612 |
| 500 | 97,527 | 7.0 | 13,107 | 4.3 | 4,536 |

the DEC (Decimal) Tab Instruction will make your typing easier. The Dec Tab Instruction makes it possible to type a column of numbers without having to space or type Required Backspaces to align them properly.

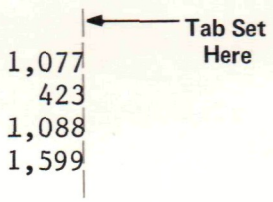
---

With a Dec Tab Instruction, you type only the numbers and the typewriter aligns them for you at the decimal point—where the tab for the column is set.



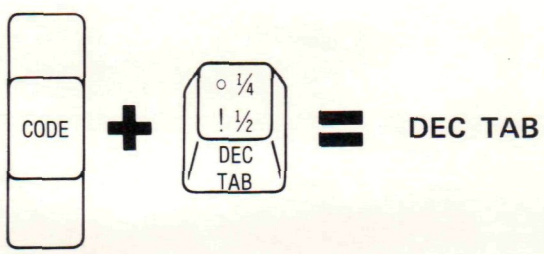

---

If the decimal point is not typed, set the tab where the decimal point would normally appear.

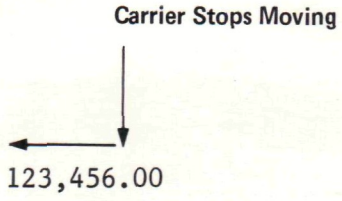



---

The Dec Tab Instruction is typed before the column of numbers. This instruction causes the carrier to move to the next tab setting and also sets up the typewriter to align the numbers.



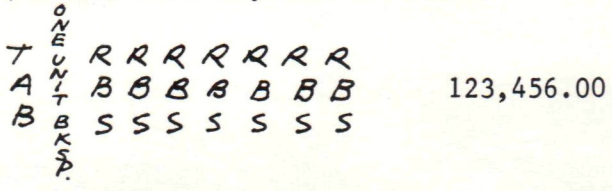
Nothing prints on your paper while you are typing. However, as you type the numbers, the carrier backs up one space for each character preceding the decimal point.




As soon as you have completed typing the set of numbers and tab to the next column, the numbers you just typed print on your paper properly aligned.

---

When you type a Dec Tab Instruction, the typewriter puts a regular tab and Required Backspaces into memory. Thus, after typing a column, the text in memory looks like this:




The typewriter puts one Required Backspace for each character preceding the decimal point.*

---

You have just learned that dec tabbing to the next column causes the numbers you type to print on the paper.

Sometimes you will want the numbers to print, but you do not want to dec tab. Typing any one of the following actions will cause the numbers to print:

- carrier return
- regular tab
- Word Underscore
- Required Backspace
- Index Return
- Required Carrier Return

*Two characters are required for a Dec Tab so that cards created on the IBM Mag Card II may be played back properly on the IBM Mag Card "Executive" Typewriter.

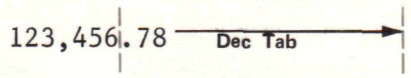
If you make a mistake while typing the numbers, simply backspace once and retype all the numbers.

BACK SPACE ONCE = RETYPE THE NUMBERS IN THAT COLUMN

One backspace deletes all the numbers you have typed in that column. It does not delete the dec tab at the beginning of the column.

---

Immediately after typing a dec tab, the typewriter is temporarily "locked." For example, if you notice an error after you have dec tabbed to the next column,




you must first "unlock" the typewriter with a carrier return.* Then,

- Line return.
- Line delete.
- Retype the line.

---

Type the following using Dec Tab: (Dec Tab) 567.89 (carrier return)
(Dec Tab) 1.23 (carrier return)
(Dec Tab) .56 (carrier return)

Play back.

Notice that the carrier moves to the tab stop and then backspaces to the beginning of the column before printing the number—just as when you typed it.

PAGE START and play back the numbers by CHAR.

Notice that you must depress CHAR twice to play a Dec Tab.

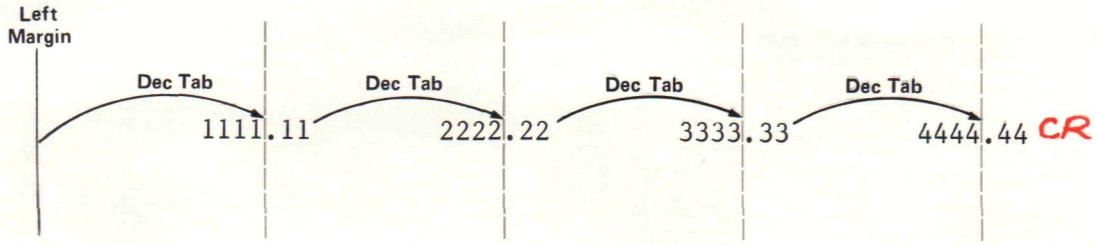
PAGE START and play back the numbers by WORD.

Notice that this is the same as playback of normal tabs.

---

* Any of the other actions that cause the numbers to print will also "unlock" the typewriter.

When typing succeeding columns of numbers to be aligned, dec tab after typing each set of numbers.




At the end of the line, carrier return.

---

## EXERCISE NO. 40

Type the exercise using dec tab to align the columns.

Follow these steps:

1. Clear memory.
2. Depress TPWR and NO ZONE.
3. Clear the tab grid* and set the following tabs: 36, 50, 66, 81.
4. Release TPWR.
5. Type the exercise. Remember: if you make a mistake while typing the numbers, backspace once and retype them; if you see a mistake after the numbers have printed out, carrier return, line return, line delete and retype the line.
6. PAGE START and play back a good copy.
7. Record the exercise.

SAVE THE CARD AND PLAYBACK COPY FOR LATER USE. Write the exercise number and tab stop positions on the card folder.

| | | | |
|---|---|---|---|
| $16,000.00 | $1,333.00 | $ 6,665.00 | $16,000.00 |
| 14,400.75 | 1,200.57 | 4,800.67 | 14,400.78 |
| 368.57 | 665.89 | 95.90 | 3,675.87 |
| 90,234.98 | 25.87 | 1,050.00 | 5,335.21 |
| 4,800.00 | 2,665.75 | 1,027.42 | 38,664.53 |
| 30,615.84 | 93.93 | 2.89 | 1.75 |
| 2,612.31 | 84.30 | 6,551.76 | 67.30 |
| 120.16 | 294.38 | 9,393.00 | 3,749.90 |
| 21,229.00 | 4,006.18 | 4,509.20 | 2,225.25 |
| 343.23 | 1,320.65 | 9,050.89 | 35.21 |

*Hold down the CLR portion of the Tab CLR/SET Key and carrier return.

To center a heading over a column:




- Use regular tabs and Required Backspaces to position the carrier at the center of the column. Or, you may space to the center point.
- Type a Center Instruction.
- Type the heading.

Practice centering over a column using the illustration above. Use the tabs you set for the last exercise. Follow these steps:

1. Using dec tab, type the longest line in each column. (You will use this printed line as a guide for centering the headings.)
2. Line return and line delete.
3. Center the column headings:
   - Space to the center of the column.
   - Type a Center Instruction.
   - Type the heading; end with a Required Backspace (to cancel the Center Instruction).
   - Space to the center of the next column.
4. Play back your typing and then clear the memory.

---

You may underscore a column of numbers in any one of several ways:

```
$1,120,000.00
   650,000.00
   750,000.00
     9,000.00
_____________
```

- Required Backspaces/underscores
- Word Underscore Instruction
- Stop Instruction/forward underscores

To use Required Backspace/underscores:

- End the column with a Required Backspace instead of a dec tab or carrier return. When printing stops, the carrier will be positioned under the last number in the column.

```
      ↓
123,456.78
```

- Type the remaining Required Backspaces and the underscores.
- Dec tab to the next column, or carrier return.

---

When using the Word Underscore Instruction:

- Type enough Required Spaces with the last number typed so that when the "word" is underscored the underscoring is long enough.

```
                    $1,234,567.00
                       650.098.00
                       750,000.00
5 Required Spaces ——→     9,000.00
                  ‾‾‾‾‾‾‾‾‾‾‾‾‾‾
```

- After printing stops, dec tab to the next column, or carrier return.

---

For double underscoring:

```
$1,234,567.00
   650,098.00
   750,000.00
     9,000.00
  ‾‾‾‾‾‾‾‾‾‾‾
  ‾‾‾‾‾‾‾‾‾‾‾
```

use the Stop/forward underscoring method:

- Type the entire line of numbers.
- Carrier return.
- Type a Stop Instruction.*
- Roll the paper back.
- Type the first line of underscores.
- Carrier return again.
- Type a Stop Instruction.
- Use the platen variable knob to position the typing line very close to the first line of underscores.
- Type the second line of underscores.

---

* The Stop Instruction is to allow you to make the same machine adjustments (roll paper back, etc.) during playback.

You know that the Dec Tab Instruction causes numbers to align at the decimal point.

Some columns may contain decimal points other than the one used to align the column:

$1,494,617
2.17
1.19
2.33

---

In the above example, you would use an uppercase period when typing 2.17, 1.19 and 2.33 to avoid this:

$1,494,617
2.17
1.19
2.33

The typewriter does not interpret the uppercase period as a decimal point.

---

If the column should appear like this:

$1,494,617
2.17
1.19
2.33

You would type three additional spaces at the end of 2.17, 1.19, and 2.33. To summarize, after dec tabbing to the appropriate tab stop, you would type:

2 uppercase period 1 7 space space space

## EXERCISE NO. 41

Type the exercise below and practice underscoring columns aligned by dec tabbing.

Follow these steps:

1. Set the following tabs (be sure TPWR is down): 29, 45, 60, 75, 91.
2. Release TPWR.
3. Type the exercise. If you make a mistake while typing a group of numbers, backspace once and retype them; if you see a mistake after the numbers have printed out, carrier return, line return, line delete and retype the line.
4. Remember, NO ZONE is down when typing tabular material.
5. Play back a copy and record the exercise.

SAVE THE CARD AND PLAYBACK COPY FOR USE LATER.
Remember: write the exercise number and tab stops on the card folder.

**PRACTICE COPY:**

| 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|
| $ 797,322 | $ 928,328 | $ 968,658 | $1,342,375 | $1,868,838 |
| 2,065,411 | 2,311,031 | 2,604,167 | 905,331 | 3,476,543 |
| 2,862,733 | 3,239,359 | 3,572,825 | 4,247,706 | 345,291 |
| 378,995 | 381,481 | 438,100 | 628,112 | 728,268 |
| 747,439 | 843,106 | 924,963 | 128,245 | 532,351 |
| 1,126,434 | 1,224,586 | 1,363,063 | 1,756,357 | 2,260,619 |
| 7,978,334 | 8,927,891 | 9,871,776 | 9,008,126 | 9,211,910 |
| 118,040 | 165,964 | 18,767 | 30,671 | 43,173 |
| -- | -- | -- | -- | -- |
| 8,096,374 | 9,093,855 | 9,090,543 | 9,038,797 | 9,255,083 |
| $6.79 | $8.00 | $8.81 | $9.43 | $11.61 |
| 2.21 | 3.09 | 3.90 | 4.20 | 4.35 |
| -- | 25% | -- | 50% | 2 1/2% |
| $434,743 | $475,313 | $523,319 | $640,620 | $863,611 |

## REVISIONS

Follow the same revision procedures for revising tabular material you have already learned:

- Play out the first line of the table.
- Access to the line where the change is to be made.
- Make the revisions using the following procedures.

---

To insert character(s) in a figure:

10,000

- Play up to the figure.
- Play the figure with CHAR until the carrier begins to backspace.
- Insert a Required Backspace for each character to be inserted.
- Play by CHAR to the point of insertion.
- Insert the character(s).

---

To delete character(s) in a figure:

233,456

- Play up to the figure.
- Play by CHAR until the carrier begins to backspace.
- Delete once (deleting the Required Backspaces) for each character to be deleted.
- Play by CHAR to the point of deletion.
- Delete the character(s).

---

To substitute one character for another:

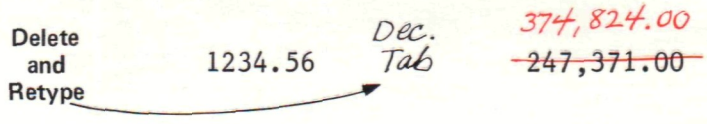
78,990

- Follow the usual procedure: Play to the point of change; delete the incorrect character(s); and insert the correct one(s).

To replace an entire figure:

1234.56 ~~247,371.00~~ 374,824.00

You must retype (not play) the dec tab preceding the figures. Therefore, when replacing, you will have to delete the last dec tab before the column and then retype it.




Follow these steps to make this type of change:

- Play by WORD to column preceding the column with the incorrect figure.
- Play through this figure by CHAR up to the dec tab.
- Delete twice by WORD. This deletes the dec tab that positions you at the incorrect figure, and the Dec Tab following.
- Type a Dec Tab Instruction, the correct figure and a regular tab. (The regular tab ends the dec tab column without setting up another one and allows you to access to the next point of change, or record the text.)

---

Remember . . .

- Change tab settings.
- Depress NO ZONE.
- Depress CHAR twice to play back a Dec Tab.

Do Exercise Nos. 42 and 43.

## EXERCISE NO. 42

Use this exercise to practice revising tabular material.

Follow these steps:

1. Locate the card from Exercise No. 40.
2. Depress TPWR; clear the tab grid and set the necessary tabs.
3. Release TPWR.
4. Read the card into memory.
5. Make the revisions marked on the practice copy.
6. Play back final copy.
7. Clear memory.

**PRACTICE COPY:**

| | | | |
|---|---|---|---|
| $16,000.00 | $1,333.00 | $6,665.00 | $16,000.00 |
| 14,400.75 | 1,200.57 | 4,800.67 | 14,400.78 |
| 368.57 | 665.89 | 95.90 | 3,675.87 |
| ~~90,234.98~~ | ~~25.87~~ | ~~1,050.00~~ | ~~5,335.21~~ |
| 4,800.00 | 2,665.75 | 1,027.42 | 38,664.53 |
| 30,615.84 | 93.93 | 2.89 | 1.75 |
| 2,612.31 | 84.30 | 6,551.76 | 67.30 |
| 120.16 | 294.38 2,675.22 | ~~9,393.00~~ | 3,749.90 |
| 21,229.00 | 4,006.18 | 4,509.20 | 2,225.25 |
| 343.23 | 1,320.65 | 9,050.89 | 35.21 |

## EXERCISE NO. 43

Use this exercise to practice revising tabular material.

Follow these steps:

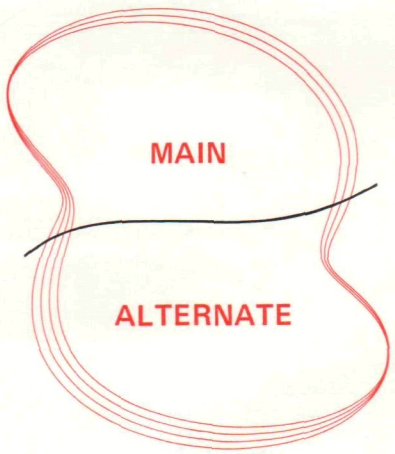
1. Locate the card from Exercise No. 41.
2. Depress TPWR; clear the tab grid and set the appropriate tabs.
3. Release TPWR.
4. Read the card into memory and make the following changes.
   (Remember: NO ZONE is down when you revise tables.)
5. Play back final copy.
6. Clear memory.

| 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|
| | | 86 | | |
| $ 797,322 | $ 928,328 | $ ~~968~~,658 | $1,342,375 | $1,868,838 |
| 2,065,411 | 2,311,031 | 2,604,167 | 905,331 | 3,476,543 |
| 2,862,733 | 3,239,359 | 3,572,825 | 4,247,706 | 345,291 |
| 378,995 | 381,481 | 1/ 438,100 | 628,112 371,552 | 728,268 |
| 747,439 | 843,106 | 924,963 | ~~128,245~~ | 532,351 |
| 1,126,434 | 1,224,586 | 1,363,063 | 1,756,357 | 2,260,619 |
| 7,978,334 | 8,927,891 | 9,871,776 | 9,008,126 | 9,211,910 |
| 118,040 | 165,964 | 18,767 | 30,671 | 43,173 |
| -- | -- | -- | -- | -- |
| 8,096,374 | 9,093,855 | 9,090,543 | 9,038,797 | 9,255,083 |
| | | 7.45 | | |
| $6.79 | $8.00 | ~~$8.81~~ | $9.43 | $11.61 |
| 2.21 | 3.09 | 3.90 | 4.20 | 4.35 |
| -- | 25% | -- | 50% | 2 1/2% |
| | | 13 | | |
| $434,743 | $475,313 | $523,319 | $640,620 2 | $863,611 |

Alternate Section

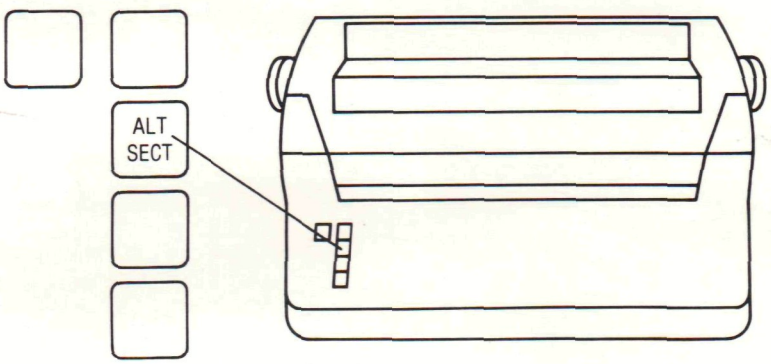


For some applications, the memory is divided into two sections—the "main" section and the "alternate" section.



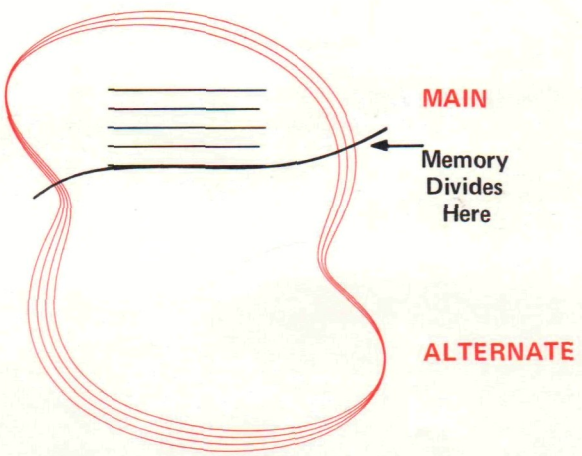

---

The alternate section is created when the ALT SECT (Alternate Section) Button is locked down.

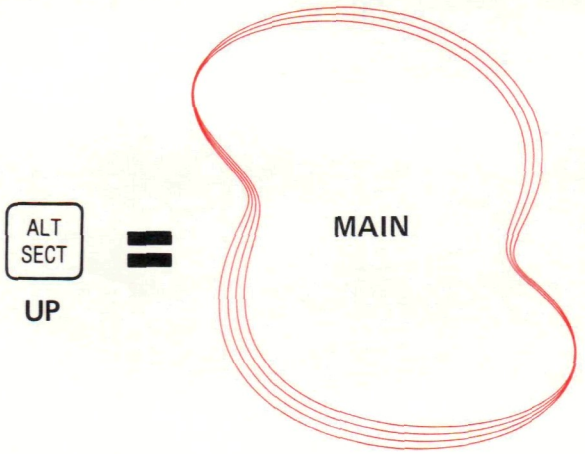



---

When ALT SECT is depressed, the memory is not divided into two equal sections. Instead, the typewriter separates the text stored in memory from the rest of memory, thus creating a main section and the alternate section.

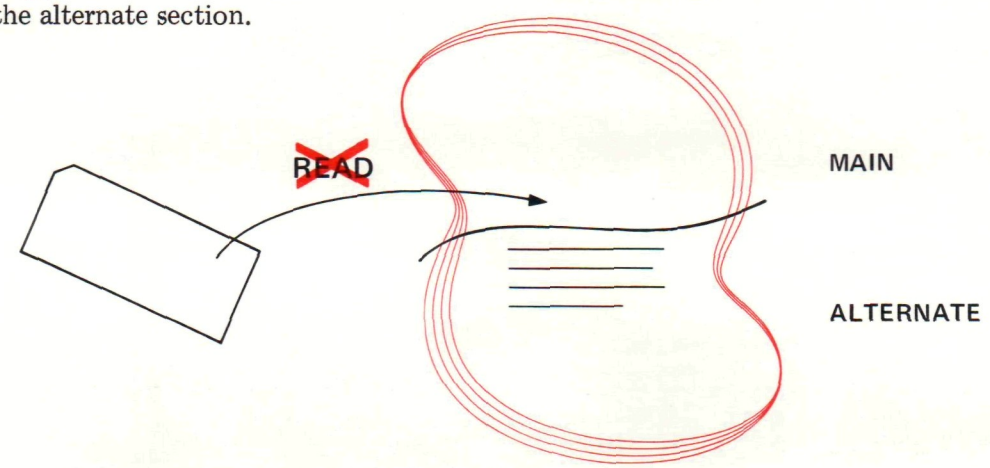


Up to now, you have been working with the ALT SECT Button up. Thus you have been using the entire memory—the main section.

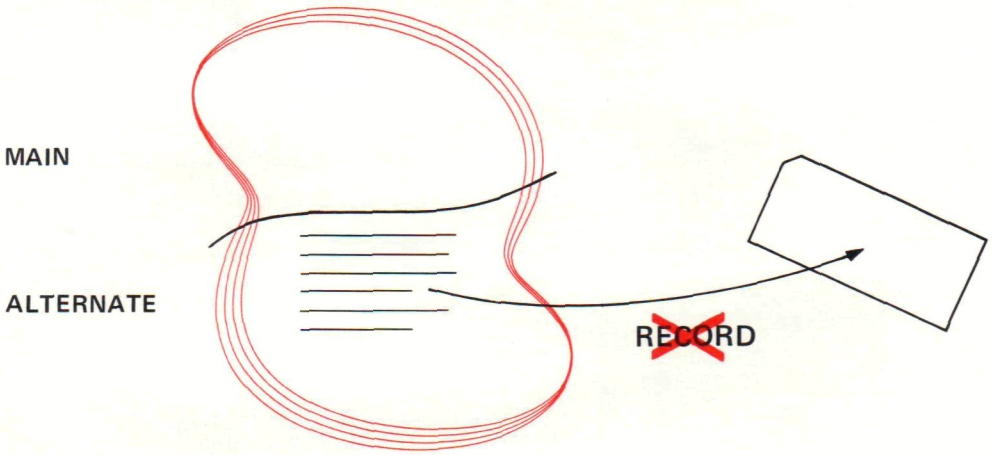



Each section can be used independently of the other. However, there are two exceptions:

- The typewriter will not read into the main section if there is text in the alternate section.

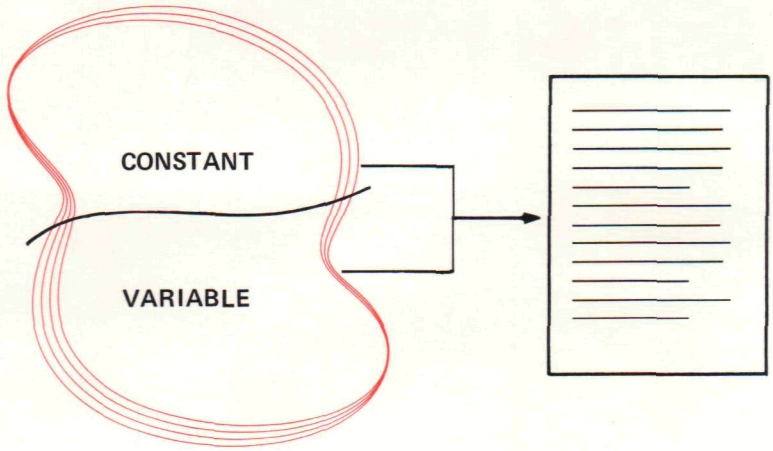



- It is not possible to record text out of the alternate section.



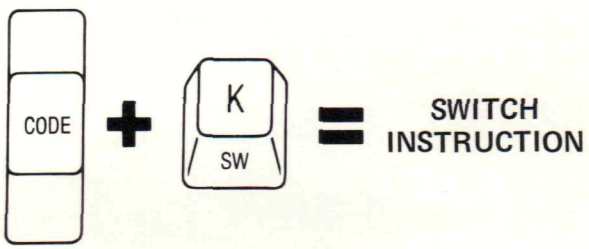

All actions pertaining to memory, such as clearing or accessing, affect only the section which is active. For example, when the ALT SECT Button is down, typing a Clear Instruction clears only the alternate section.

The purpose of dividing the memory is to allow the merging of constant and variable information during playback to create a complete document.



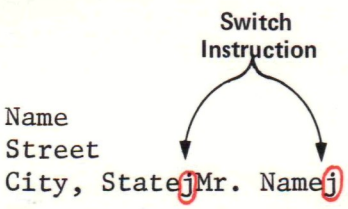

---

The instruction that causes the pointer to go from one section to the other during playback is the Switch (SW) Instruction. A Switch Instruction is typed by holding the CODE Button and typing a "k".

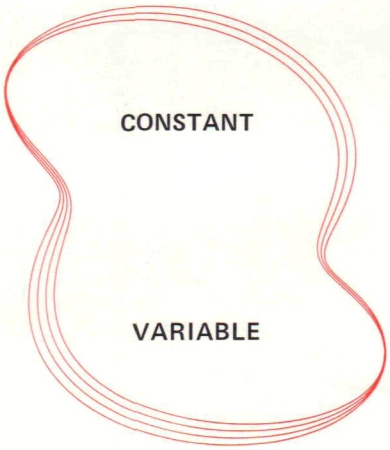



---

When a Switch Instruction is typed, a "j" will print on your paper. This lets you easily proofread and correct the placement of the Switch Instruction before you record.



To learn how to cause playback to merge from both sections of memory, let's look at the most common application—repetitive letters. Earlier you learned how to type the names and addresses in during playback. Now you will learn how to prepare the letter and names and addresses for automatic playback of complete letters.







---

For automatic playback, the letter is typed with a SW Instruction wherever playback is to switch to the variable information. Remember also, the letter should begin with a Stop Instruction and end with a Repeat Instruction.

```
S
Date


SW Name
   Address
      SW
Dear ↓Name:

----------------------------------------------------------
----------------------------------------------------------
---------------------------------.

--------------------


------------------

/bh
REPT
```

As you prepare the variable information, type an SW Instruction. wherever the typewriter is to switch back to the constant information.

2CR
Name
Street
City, State SW name

2CR
Name
Street
City, State SW name

---

**EXERCISE NO. 44**
Preparing the constant information.

Follow these steps:

1. Type the exercise exactly as shown. Type special instructions where indicated on the copy. Do not type anything enclosed in a [ ].
2. Proofread for errors and placement of SW Instructions. Make the necessary corrections.
3. Play back a copy. A "j" will print where an SW is typed.
4. Record the letter. Place the card in a folder and save it with the playback copy.

**PRACTICE COPY**

S
Date

SW
Inside Address

SW
Dear Name:

We are enclosing our draft in full payment of your recent claim.

If you have any information to show that this file should not be closed, please let us know immediately.

Very truly yours,

John P. Henry
Claims Supervisor

rjc
REPT.

## EXERCISE NO. 45

Preparing the variable information.

Instructions:

1. Type the practice copy line for line, exactly as shown.
2. Proofread and correct any errors you might find.
3. Play back copy of the variable information.
4. Record the variable card.

**PRACTICE COPY:**

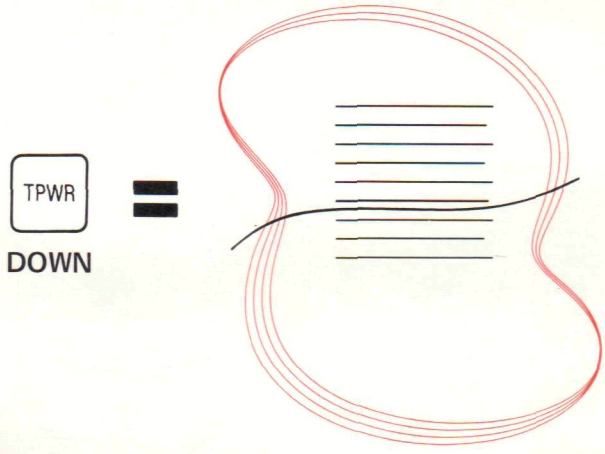
2CR

Mr. Nice E. Baring RCR
1966 South First RCR
San Francisco, California 94110jMr. Baringj
2CR
Mr. Monson Johnson RCR
707 King Edward Drive RCR
Scranton, Pennsylvania 36294jMr. Johnsonj
2CR
Mr. Abel Label RCR
2306 Willow RCR
Seattle, Washington 90401jMr. Labelj
2CR
Ms. Victoria Richter RCR
23570 Rosewood Avenue RCR
Austin, Texas 78720jMs. Richterj

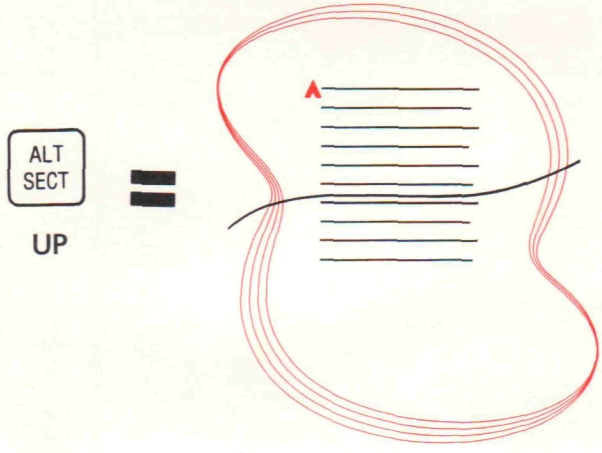
---

You already know that you will be dividing the memory into two sections to play back these letters.

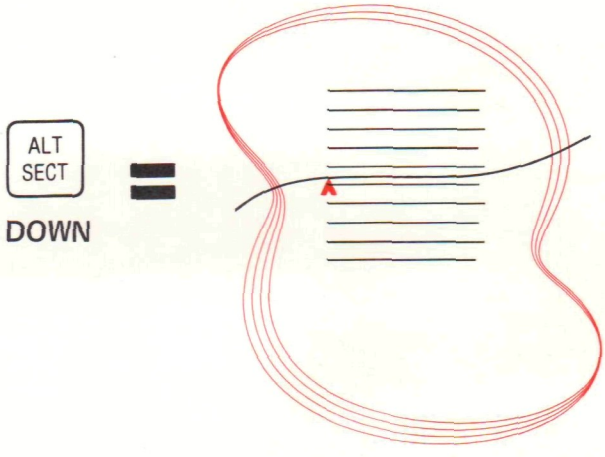
For the typewriter to switch the pointer from one section to the other during playback, the TPWR Button must be locked down.



The position of the ALT SECT Button determines where playback will begin. If ALT SECT is up, the pointer is in the main section and playback will begin from the main section.




When ALT SECT is locked down, the pointer is in the alternate section; thus playback will begin with text from the alternate section.




NOTE:
If the TPWR Button is not locked down, the pointer will not switch from one section to another. Instead, the pointer stays in the section addressed by the ALT SECT Button.

## EXERCISE NO. 46

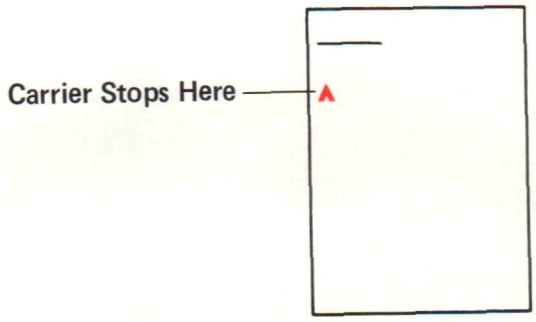
Playing Back Automatic Letters
Instructions:
Follow these steps:

1. Depress TPWR.
2. Read the constant card into memory through the Single Card Slot. Return the card to the folder and save.
3. Depress ALT SECT.
4. Read the variable card into memory (alternate section) through the Single Card Slot. Save this card for later use.
5. Release ALT SECT.
6. Insert paper.
7. Depress AUTO to play back the first letter.
8. Insert new paper; depress AUTO.
9. Repeat step 8 until all letters have played back.

DO NOT CLEAR MEMORY OR TURN THE MACHINE OFF. YOU WILL CONTINUE IN A MINUTE.

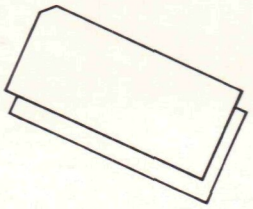
---

You will know when all the names and addresses stored in the alternate section have played out. When the typewriter switches to the alternate section and there is no more variable information, playback will stop.




Depress AUTO. Playback will stop where the address should appear.

Sometimes, you may have more than one card of variable information.



= VARIABLES

To read the next card of names and addresses into memory and continue creating individual letters:

1. Depress ALT SECT.
2. Type a Clear Instruction.
3. Read the next card of variables into memory.
4. Release ALT SECT.
5. Depress PAGE START and AUTO to continue playback.

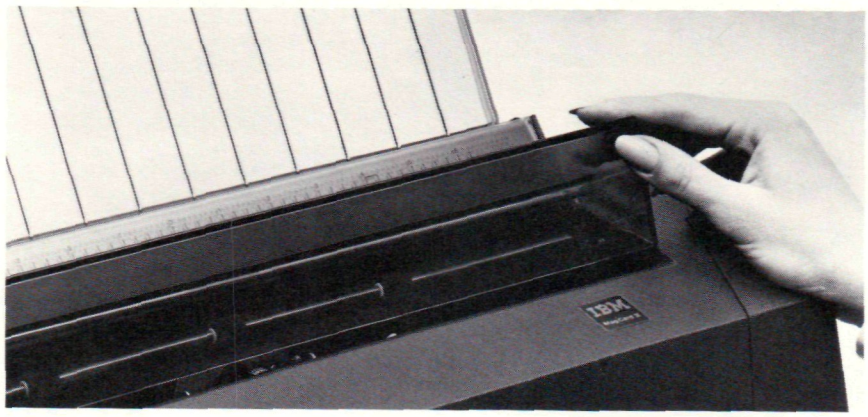
> Using the five steps given above, read the variable card into memory again. Play back the first letter.

When the project is complete, the memory may be cleared. Each section must be cleared individually. The main section is cleared while the ALT SECT Button is up; to clear the alternate section, the button must be down.

> Clear both sections of memory.
>
> SAVE THE CONSTANT CARD FOR USE IN A LATER EXERCISE.

Unless you have window envelopes, you must prepare envelopes for the letters you type. The easiest way to prepare envelopes is to type them as you type the names and addresses.

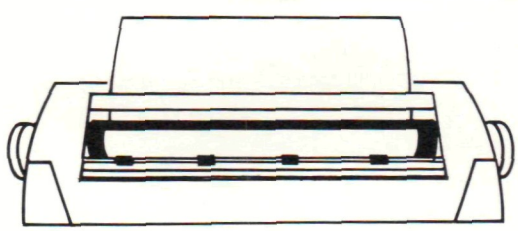
First, get your typewriter ready. Remove the Acoustical Filter Hood. To remove the hood, merely lift it up. (You do not have to remove the rack.*) To replace the hood, center it over the top opening in the typewriter, then lower the back edge into position.



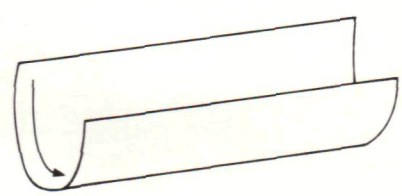
Remove the Acoustical Filter Hood.

---

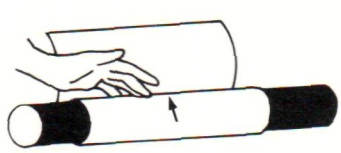
Next, bring the paper bail toward you and insert a piece of paper lengthwise around the platen.



INSERT
PIECE OF PAPER
LENGTHWISE AROUND
PLATEN



Roll the paper until it is wound around the platen.



ROLL THE PAPER
COMPLETELY
AROUND THE PLATEN



Move the paper bail back against the platen.

*If you wish to remove the rack, pull up firmly on it.

## EXERCISE NO. 47A

Follow these steps:

1. Insert an envelope in the typewriter.
2. Depress TPWR.
3. Move your left margin in to where you want the name and address to begin on the envelope.
4. Release TPWR and type:*

```
2CR
Mr. Hobart James
478 Shady Slope Road
Cleveland, Ohio  44781
```

5. Remove the envelope. DO NOT CARRIER RETURN.
6. Type on the paper rolled around the platen:

```
   SW
Mr. James
```

7. Roll in a new envelope (do not carrier return).
8. Type:

```
2CR
Mrs. Roy Shaft
P.O. Box 356
Denver, Colorado  80348
```

9. Remove the envelope (do not carrier return).
10. Type:

```
   SW
Mrs. Shaft
```

11. Repeat steps 7-10 to type envelopes as you type these names and addresses:

```
2CR
Mr. Bob Mullett
170 West Avenue                SW
Chicago, Illinois 60723Mr. Mullett
2CR
Miss Bonnie Lou Derrick        SW
777 South Hampton Street
Portland, Oregon 97856Miss Derrick
2CR
Mr. Anthony Smith
1322 Hanger Avenue                SW
Little Rock, Arkansas 73289Mr. Smith
```

*If you make an error while typing, correct it by backspacing and retyping.

## EXERCISE NO. 47B

Practice recording the variable card.

Follow these steps:

1. Remove the paper from around the platen.
2. Replace the Acoustical Filter Hood.
3. Depress TPWR. Reset the left margin to 18; release TPWR.
4. Play back a copy of the names and addresses.
5. Proofread for corrections and placement of SW Instructions.
6. Correct any errors.
7. Record the variable information.

## EXERCISE NO. 48

Practice playing back the letters.

Follow these steps:

1. Depress TPWR.
2. Read the constant information into the main section. (Use the card from Exercise No. 44.)
3. Depress ALT SECT; read the variable information into memory.
4. Release ALT SECT.
5. Insert paper and play back the letters. (Each letter on a separate page.)
6. Clear both sections of memory.

SAVE THE CONSTANT CARD FOR USE IN A LATER EXERCISE.

Variable information is sometimes inserted in the middle of a letter or document.

```
Date


Name
Address

Dear Name:

_____date._____
_____________________________________________________
_____________________________.

_________________


_______________

/bh
```

This Variable Changes In Each Letter

---

In this case, you would type the letter like this:

```
S
Date


SW
Name
Address

Dear SW Name:

_____SW_____
     date SP _____
_____________________________________________________
_____________________________.

_________________


_______________

/bh
REPT.
```

and the variable information like this:

```
2 CR
Name
Street
City, StateSW NameDate SP
```

## EXERCISE NO. 49A

Follow these steps:

1. Type the letter exactly as shown.
2. Proofread for errors and placement of SW Instructions; make the necessary changes.
3. Play back the letter.
4. Record the letter.

S
Date
4CR's
SW
Inside Address
2 CR SW
Dear Name:

SW
We have received and cleared through customs your shipment of item from our overseas warehouse in Liverpool, England.

It may be picked up at the Gifts, Inc., showroom, 573 East Avenue, any day between the hours of nine and four o'clock.

Very truly yours,

George Miller
Customer Service

rjc
2CR
REPT

## EXERCISE NO. 49B

Follow these steps:

1. Type these variables exactly as shown.
2. Proofread the typed copy; make corrections if necessary.
3. Record the variable information.

```
2 CR
Mr. James Johnson
318 Elmwood Way
Pittsburgh, Pennsylvania  15003Mr. JohnsonSwiss clocks
2 CR
Mr. Harold Weyer
8990 Bushcreek
Akron, Ohio  44307Mr. WeyerEnglish bone china
2 CR
Mrs. Emil Neilson
45 Dove Road
Lexington, Kentucky  40307Mrs. NeilsonBrussels lace
```

SW SW SW SP

SW SW SW SP

SW SW SW SP

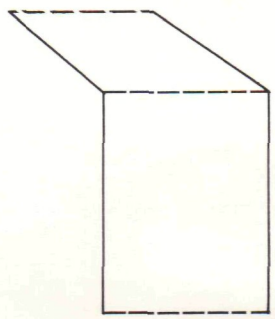
## EXERCISE NO. 50

Follow these steps:

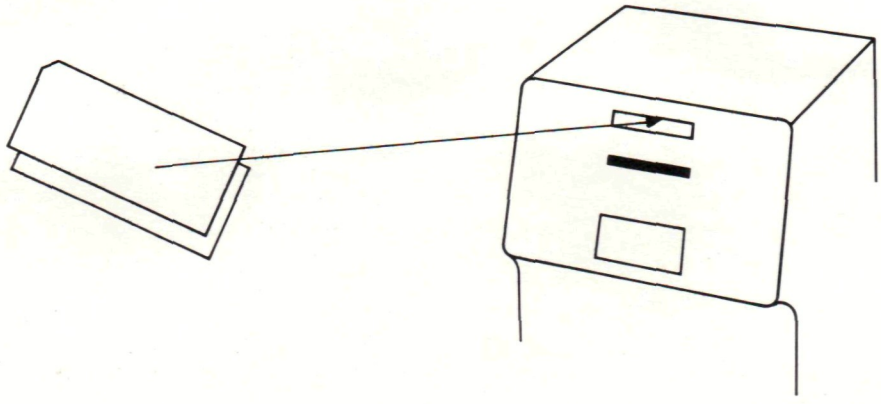
1. Depress TPWR.
2. Read the constant card into the main section.
3. Depress ALT SECT; read the variable information into memory.
4. Release ALT SECT; play back the letters

Do not save these cards; they may be reused.

If you use continuous paper, playback can be automatic and unattended. With unattended playback, the typewriter plays back one letter after another without stopping.

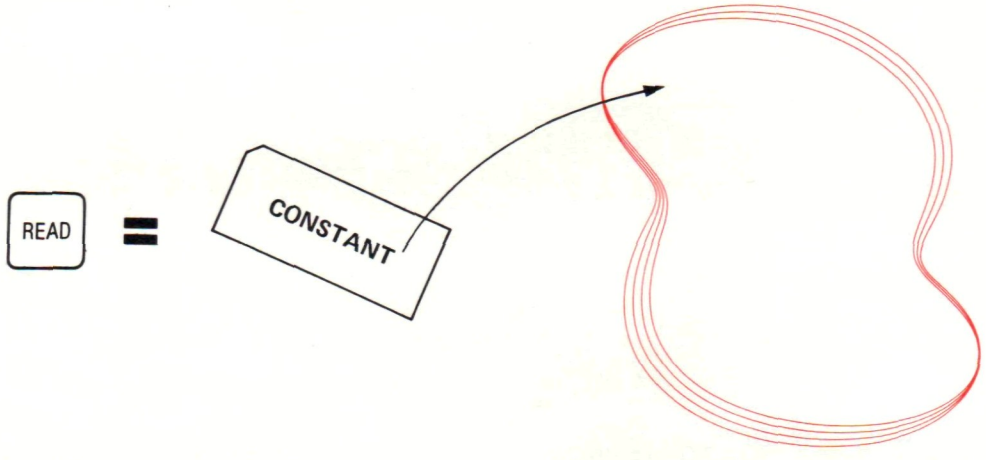


For unattended playback, the cards are placed in the Pack Feed Slot.



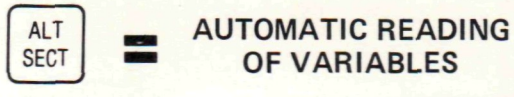
---

The constant card is read into memory by depressing the READ Button.



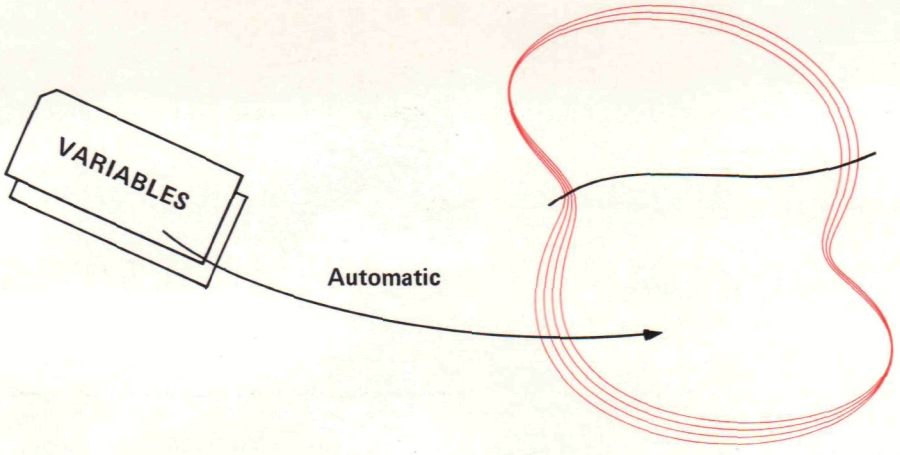

---

The variable cards are read automatically. In order for this to happen, the ALT SECT Button is locked down during playback.



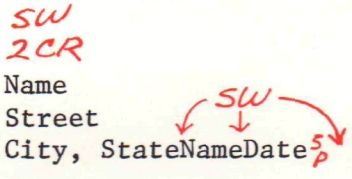

**DOWN**

Then, if there is more than one card of variable information, the typewriter will automatically read the next card and continue to play back the letters.



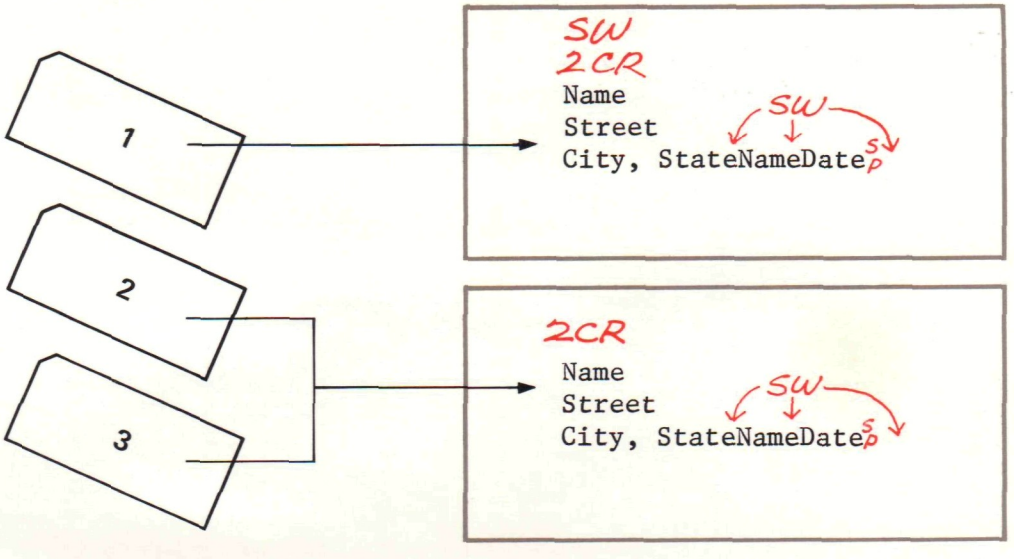

---

In preparing the variable information for unattended playback, the first card of variables must begin with an SW Instruction. Remember, since ALT SECT is down, the pointer is in the alternate section. The SW Instruction puts the pointer in the main section to begin playout of the first letter.




---

The second and subsequent cards of variables are recorded as usual.



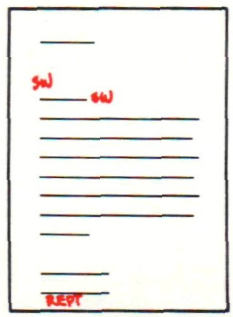
If you have many names and addresses, you will want to "pack" as many as possible on a card. To do this, type the variables as follows:

```
2IR
NameIR
StreetIR
City, StateNameDateSP 2IR
```

Notice that Index Returns are used instead of carrier returns. This permits maximum use of the space on each card.

---

The letter is typed exactly as you would for attended playback, but without the Stop Instruction at the beginning. However, since Stop Instructions are ignored during unattended playback, it does not matter if the Stop Instruction is typed.




---

**EXERCISE NO. 51A**
**TYPING THE FIRST CARD OF VARIABLES FOR UNATTENDED PLAYBACK.**

Follow these steps:

1. Type these variables exactly as shown.
2. Proofread the typed copy; make corrections if necessary.
3. Record the variable information.
4. Go to exercise no. 51B.

```
SW
2IR
Mrs. Bret BootIR    IR
9502 Fairbanks Avenue  SW
Helena, Montana  59666Mrs. Boot  SW
2IR
Miss Jody LeafIR
Attorney at LawIR    IR
954 Professional Building  SW
Deer Lodge, Montana  59708Miss Leaf  SW
2IR
Mr. Ken OrlandIR
606 Shott BuildingIR  SW
Helena, Montana  59765Mr. Orland  SW
```

If you have many names and addresses, you will want to "pack" as many as possible on a card. To do this, type the variables as follows:

```
Name
Street
City, StateNameDate
```

Notice that Index Returns are used instead of carrier returns. This permits maximum use of the space on each card.

---

The letter is typed exactly as you would for attended playback, but without the Stop Instruction at the beginning. However, since Stop Instructions are ignored during unattended playback, it does not matter if the Stop Instruction is typed.



---

**EXERCISE NO. 51A**
**TYPING THE FIRST CARD OF VARIABLES FOR UNATTENDED PLAYBACK.**

Follow these steps:

1. Type these variables exactly as shown.
2. Proofread the typed copy; make corrections if necessary.
3. Record the variable information.
4. Go to exercise no. 51B.

```
Mrs. Bret Boot
9502 Fairbanks Avenue
Helena, Montana  59666Mrs. Boot
Miss Jody Leaf
Attorney at Law
954 Professional Building
Deer Lodge, Montana  59708Miss Leaf
Mr. Ken Orland
606 Shott Building
Helena, Montana  59765Mr. Orland
```

## EXERCISE NO. 51B
## TYPING A SECOND CARD OF VARIABLE INFORMATION.

Follow these steps:

1. Type these variables exactly as shown.
2. Proofread the copy; make the necessary corrections.
3. Record the variable card.

```
2 IR
Miss Suzie Sweet IR
180 River Road, Apt. 217
Tampa, Florida  33909Miss Sweet
2IR
Mr. Lennie Rickert IR
89 Shootem Road IR
Fargo, North Dakota  58290Mr. Rickert
```

---

To get the typewriter ready to play back the letters, follow these steps:

1. Insert continuous paper.
2. Depress TPWR.
3. Type a line count of 66 (the number of lines from the top edge to the bottom edge of 8½ x 11-inch paper).
4. Roll the paper to the next clean sheet. Position it where the first printed line is to appear (that is, where the date is to print).

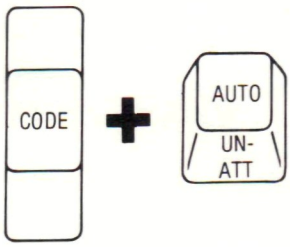
## EXERCISE NO. 52

Follow these steps:

1. Take the letter from Exercise No. 44 and place it on the bottom of the two variable cards.
2. Place the three cards in the Pack Feed Slot.
3. Check to see that TPWR is still locked down.
4. Depress READ. The constant card will be read and then eject into the Stacker; leave it there.
5. DO NOT TURN THE MACHINE OFF. YOU WILL CONTINUE WITH THIS EXERCISE SHORTLY.

---

As you know, unattended printing is started by holding the Code Button and depressing AUTO.




Upon depression of code AUTO, the typewriter will:

- read the first card of variables into memory;
- drop the card into the Stacker;
- begin playing back the letters.

---

When the typewriter switches to the alternate section and does not find any more text (because all the variables stored in memory have played back), it will:

- automatically clear the alternate section;
- read the next card of variables;
- eject the card into the Stacker;
- resume playback with a carrier return.

If unattended printing is interrupted, or you need to start over, you must reposition the pointer to the beginning of the letter and the address you wish to start with.

If playback stops in the address, follow these steps:

1. Release TPWR.
2. Line return to the beginning of the address.
3. Type an SW Instruction.
4. Line return.
5. Release ALT SECT.
6. Depress PAGE START.
7. Depress ALT SECT.
8. Depress TPWR.
9. Position paper.
10. Code AUTO.

If playback stops in the letter, follow these steps:

1. Release ALT SECT and TPWR.
2. Page Start to the beginning of the letter.
3. Depress ALT SECT.
4. Line return to the beginning of the address.
5. Type an SW Instruction.
6. Line return one time.
7. Depress TPWR.
8. Position the paper.
9. Code AUTO.

**NOTE:**
If this is the first card of variables, and you PAGE START rather than line returning, it is not necessary to insert an SW Instruction; it is already there.

---

**EXERCISE NO. 52 Continued.**

Follow these steps:

1. Depress ALT SECT.
2. Code AUTO to begin unattended playback.
3. When all the letters have played back, release ALT SECT and clear the main section.

The cards from this exercise can be reused.

---

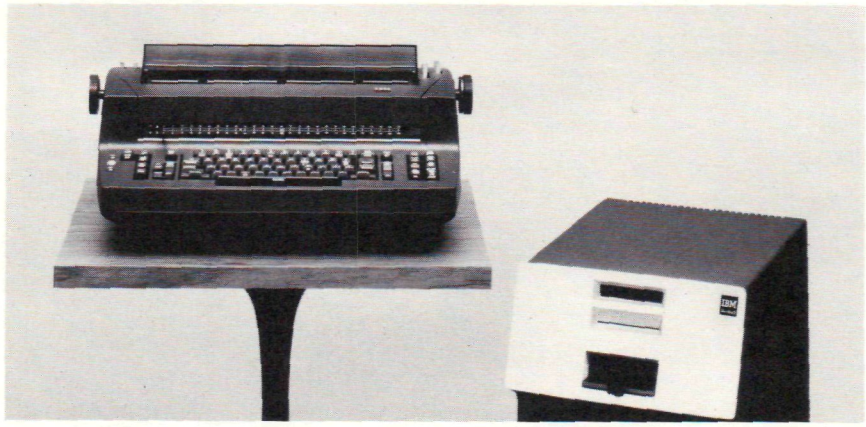
You now understand how to use the two sections of memory for creating automatic letters. There are other documents that contain constant and variable information which can be produced easily on your IBM Mag Card II using the memory divided into two sections.

- Sequentially numbered lists—The numbers remain constant; the information on the lists changes.
- Legal documents such as wills—The text is constant; names, dates, amounts, etc., vary.
- Complicated formats such as forms—The formatting (carrier returns, tabs, spaces) remains constant; the text varies.

As you prepare constant and variable information to produce documents like the above or others, you can use either section for the constant text; however, remember:

- You cannot read into the main section if there is text in the alternate section.
- You cannot record out of the alternate section.

## IBM MAG CARD II LOGIC:



The IBM Mag Card II was designed so that cards placed in the Pack Feed Slot could either be read or used for recording. The typewriter must know what you want it to do with the cards—read them or record on them.

After an empty memory condition, the first button depressed "tells" the typewriter what to do with the cards in the Pack Feed Slot. Thus, when you are reading cards from the Pack Feed Slot, the typewriter will not take one of these cards on which to record text. Instead, it turns on the Green Light so that you can feed in a card through the Single Card Slot.

However, there is one condition during the revision of a document when the typewriter would record on a card from the Pack Feed Slot that you have not read into memory.

Remember, it is the first button (either READ or REC) depressed following an empty memory condition that conditions the typewriter to either read the cards in the Pack Feed Slot or record on them. Generally, during revision the memory has text in it all the time. Or, if it doesn't, you depress READ to get more text into memory.

If the memory does not have text in it and you are going to type the text into it before reading the next card, you must do one of the following:

- After typing the text, remove the cards from the Pack Feed Slot, then depress REC, or scan. The Green Light will come on indicating that you should insert a card through the Single Card Slot.
- Type the page you are adding, but before scanning, or recording, read in the next card. Thus, the typewriter will "know" it is still reading the cards in the Pack Feed Slot. If you are not scanning, type a PE Instruction before reading in the next card. Then when you depress REC, the text from the card just read in will remain in memory.

If you do not follow one of these procedures (and you have not followed the procedure recommended on page 214), when you depress REC or when you scan, the next card in the Pack Feed Slot will be recorded on. The text on that card has not yet been read into memory for revision. You would have to retype the page.

The IBM Mag Card II Typewriter was designed to be compatible with other IBM Mag Card typewriters. This compatibility is reflected sometimes in how the typewriter functions and sometimes in the procedures followed.

Compatibility between the IBM Mag Card II and the IBM Mag Card "Executive" Typewriter was pointed out in the Decimal Tab Section. This required a function—inserting a One-Unit Backspace Code immediately after a tab typed using code "1/2".

Compatibility is also reflected in a function of the TPWR Button. You know that you can read cards into memory with the TPWR Button either up or down. The particular application you are doing determines the position of the button. However, the position of the button also determines exactly what is read into memory.

- When the TPWR Button is up, two codes are not read into memory: the Track Link Code and the Page End (Card Eject) Code. The Track Link Code is not required in memory. The Page End Code is used in memory; however, the placement is up to the operator since page endings are subject to change in memory.
- When the TPWR Button is down, every code on the card is read into memory. This allows cards recorded on a Mag Card "Selectric" Typewriter, or a Mag Card "Executive" Typewriter, to be duplicated exactly by the IBM Mag Card II Typewriter.

Text recorded out of memory is identical to the text in memory. If there are no Track Link Codes in memory, but one is needed on the card, the IBM Mag Card II records one there. If there is no Page End Code in memory, the IBM Mag Card II records one automatically at the end of the text on the card.

Most of the procedures outlined in this manual automatically result in compatibility with the other IBM Mag Card typewriters. However, there is one typing instruction used on the IBM Mag Card II which is not absolutely necessary for the IBM Mag Card II, but was necessary for compatibility. This instruction is the Index Return used to begin a project.

It is necessary to assure that the carrier is at the left margin at the beginning of a project. This could be accomplished on the IBM Mag Card II with multiple carrier returns, a carrier return and a tab, a carrier return followed by spaces, or a Required Carrier Return, as well as with the Index Return. However, because the Index Return does not use up a track on a magnetic card and to be consistent with typing procedures on the Mag Card "Selectric" Typewriter and the Mag Card "Executive" Typewriter, this instruction was selected.

---

You have now completed training for the IBM Mag Card II Typewriter. Use this book as your reference manual whenever you have questions or want to review. If after checking this book, you still have a question on how to do a specific job, contact your IBM Representative.

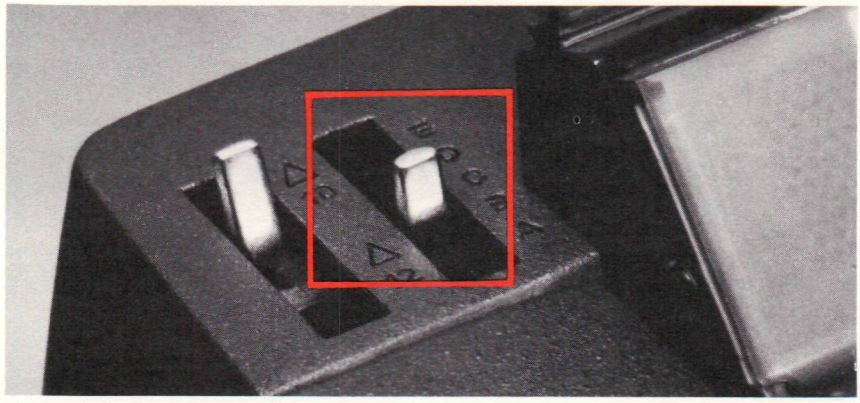
Typewriter Features



This section covers only those features on the typewriter that have not been discussed earlier in the Operating Instructions.



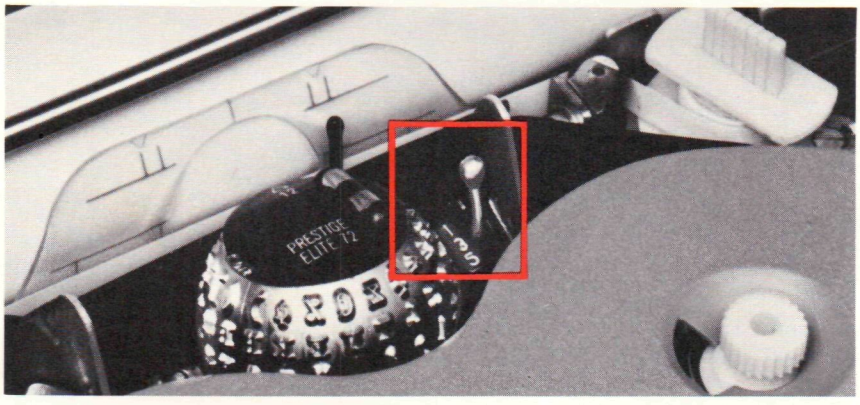
## Multiple Copy Control



When making one to three copies, set the multiple copy control lever at the position nearest you. For additional copies, move the lever back. Set the lever on C for offset masters.

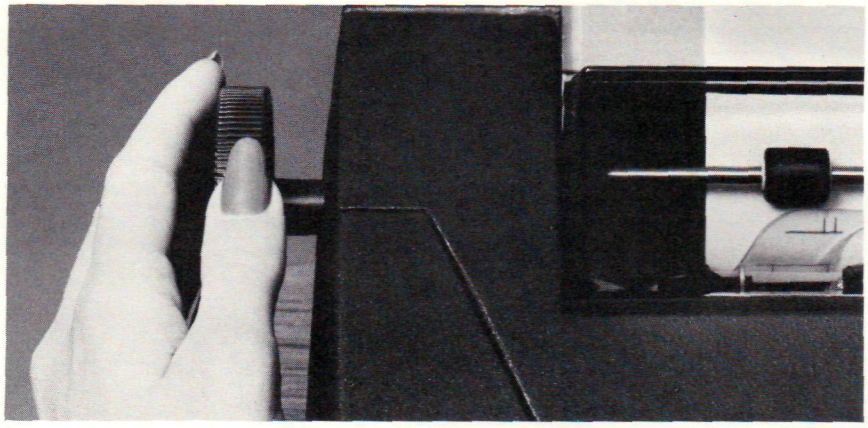
As the lever is moved back set the impression control at a higher number to increase the striking force of the element.

## Impression Control




The impression control adjusts the striking force of the element. Set on 3 for most jobs. Move it to a higher number for stencils and multiple carbons.

## Platen Knobs



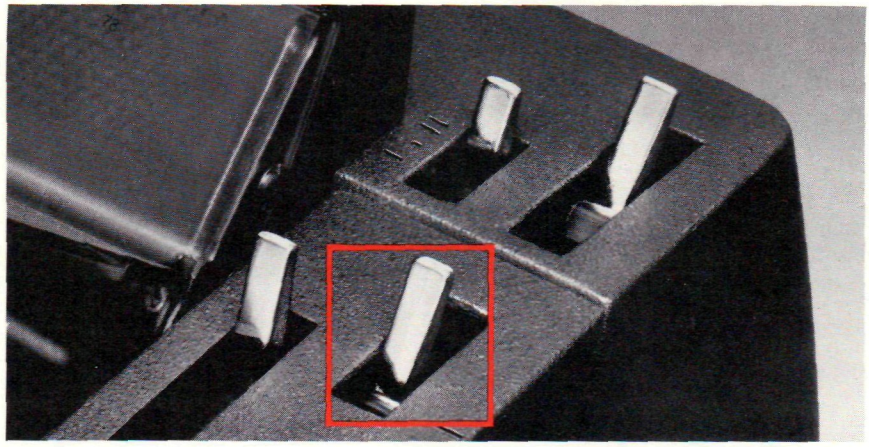
The left and right platen knobs enable you to rotate the platen manually in order to insert and position paper vertically.

## Platen Variable

Variable platen action is achieved by pressing on the left platen knob. This allows free rolling of the platen in either direction. You can permanently change the position of the writing line by using the platen variable.

---

## Line Finder



The line finder permits you to leave a typewritten line and return again.

- Move the lever forward before leaving the typing line.
- Make the insertion.
- Return to the line preceding the one in which you made the insertion and return the lever to its home position. Tap the return key to arrive at the exact typing line again.

Use this lever for typing superscripts or subscripts, creating double underscores, typing on forms where the line spacing is irregular, or drawing lines.

## Page-End Indicator



| Length of Paper (inches) | Indicator Setting |
|---|---|
| 8 | 3½ |
| 8½ | 4 |
| 9 | 0 |
| 9½ | ½ |
| 10 | 1 |
| 10½ | 1½ |
| 11 | 2 |
| 11½ | 2½ |
| 12 | 3 |
| 12½ | 3½ |
| 13 | 4 |
| 13½ | 0 |
| 14 | ½ |

The page-end indicator shows the number of inches remaining to the bottom of the page.

- Align the top edge of the paper with the top edge of the copy guide.
- Find the indicator setting opposite your paper length on the Reference Chart.
- Rotate the page-end indicator until the correct setting is at the small horizontal mark to the left of the platen knob.
- When the typing line is 4 inches or less from the bottom, the indicator shows the actual inches to the bottom of the page.

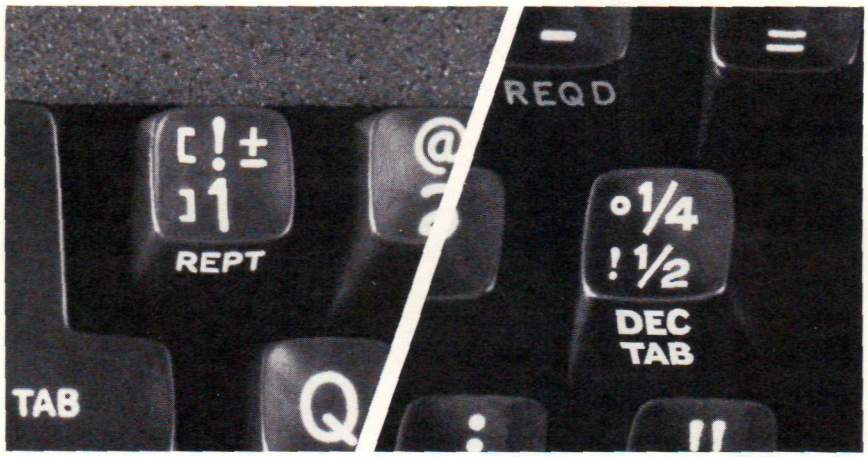
## Margin Release Key




To move through the left margin, return the carrier to the margin, press the margin release key and backspace through it.

The right margin is "free," meaning that you can type, space, or tab through it at any time. You do not have to use the margin release key.

## Multiple-Character Keys




Two keys have several characters shown on them. However, only one pair of the characters shown is on the element.

Check each element you use for the pair you have.

---

## Cardholder




The cardholder holds paper, cards and envelopes close to the platen.

The vertical line in the center of the cardholder is to the left of the next character to print.

The horizontal line on the bottom of the cardholder indicates the base of the typing line.

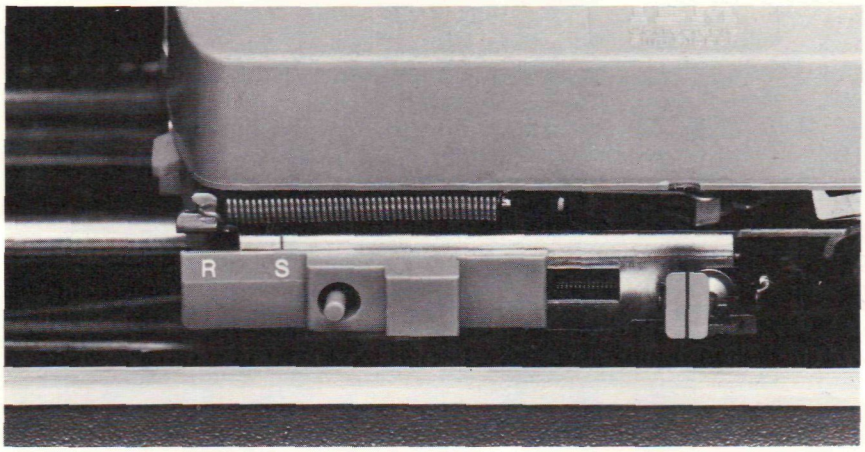
To remove the cardholder:

1. Press the cardholder against the platen with your left thumb.
2. Roll the platen up until the cardholder is free.

To clean the cardholder, use a damp cloth and mild soap.

To replace the cardholder, press the cardholder onto the two pins between the element and the platen.

## To Type Stencils:
## Selective Ribbon System




To type stencils, move the ribbon/stencil control to the left so the "S" lines up under the red mark and locks into position.

To return to regular typing, push the button on the control. This automatically moves the control to the printing position.

---

## Serial Number




To locate the serial number:

- Tab the carrier all the way to the right.
- Raise the typewriter cover.
- Locate the number directly below the platen toward the left on the metal bar as shown in the illustration.

## CARE AND MAINTENANCE

### Typewriter Maintenance

This typewriter has been engineered to extremely close and exacting standards to provide more usable speed and versatility than has ever before been available.

To maintain efficient operation it is essential that your typewriter receive periodic inspection and lubrication by trained personnel. Your IBM Representative can tell you about the advantages of such service provided under the IBM Maintenance Agreement.

### Using the Dust Cover

Cover the typewriter at the end of each typing day. The dust cover protects the typewriter from scratches and helps keep out dust and other foreign matter.

### Acoustical Filter Hood

Remove the hood when you are doing the following:

1. Cleaning it—use a damp cloth and mild soap. DO NOT use liquid type cleaner and DO NOT immerse the entire unit in water.
2. Typing on adhesive-backed labels, small cards, extra-heavy envelopes or continuous forms which do not require a pin feed platen.

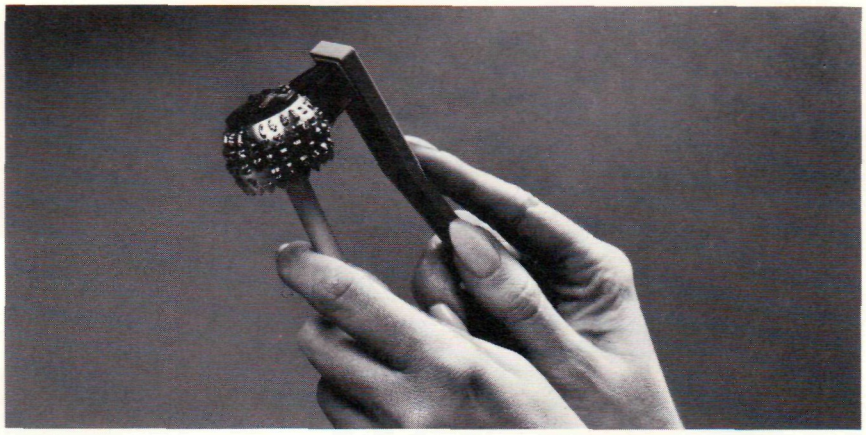
To remove the hood, merely lift it up. To replace the hood, center it over the top opening in the typewriter, then lower the back edge into position.

If you wish to remove the rack for some reason, pull firmly on it.

### Cleaning the Typewriter Cover

Use only a mild detergent to clean the plastic parts and painted portions of the typewriter since certain cleaning fluids may be harmful. Where stubborn stains persist, consult your local IBM Service Department.

## Cleaning the Element



Elements may be cleaned by using a dry IBM typewriter brush.

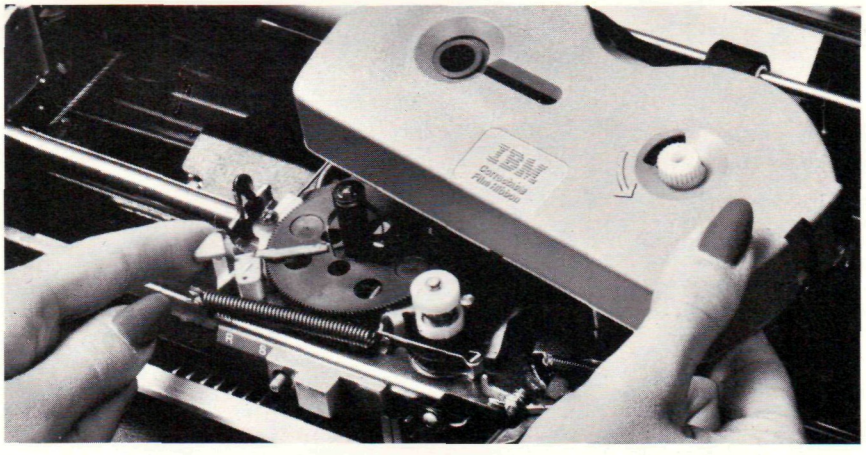
Position the element on the end of the dual-purpose brush by inserting the handle of the brush into the hole under the element and then closing the lever on the top of the element.

Clean type by brushing up and away from you with the element brush provided for this purpose.

Type cleaners in sheet form are also recommended since they may be used without removing the element from the typewriter. Just insert the sheet, move the ribbon/stencil control to stencil position, and type each character at least once.

---

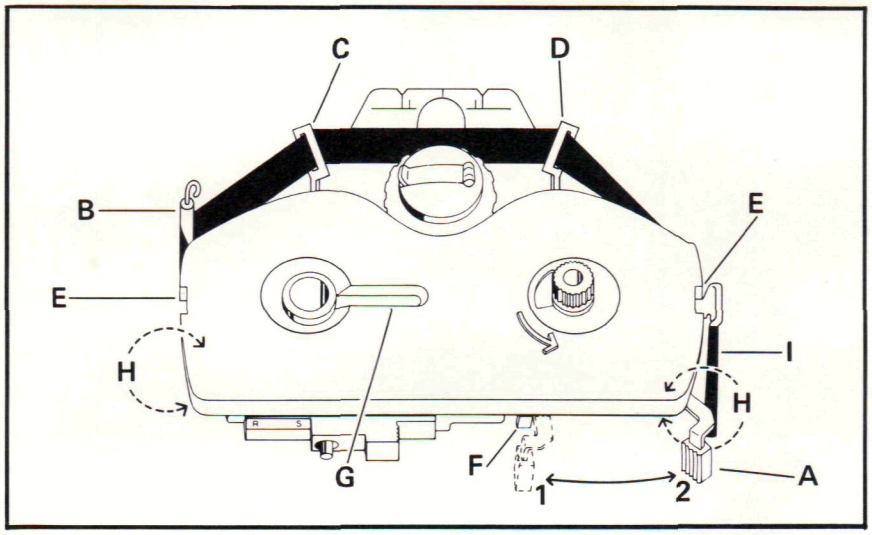
## End-of-Ribbon Feature



When the end-of-ribbon is detected by the machine, playback will stop as the next carrier return is played out from the memory. Each depression of AUTO or LINE will play out to the next carrier return. WORD and CHAR/STOP function normally.

If you put a used ribbon in your typewriter, lift up on the End-of-Ribbon Lever until you have placed the ribbon cartridge in place. This lever is under the left side of the ribbon mechanism. You will have it in the correct position when you see the top of the lever go down.

## Changing the Ribbon




### To Remove a Ribbon:

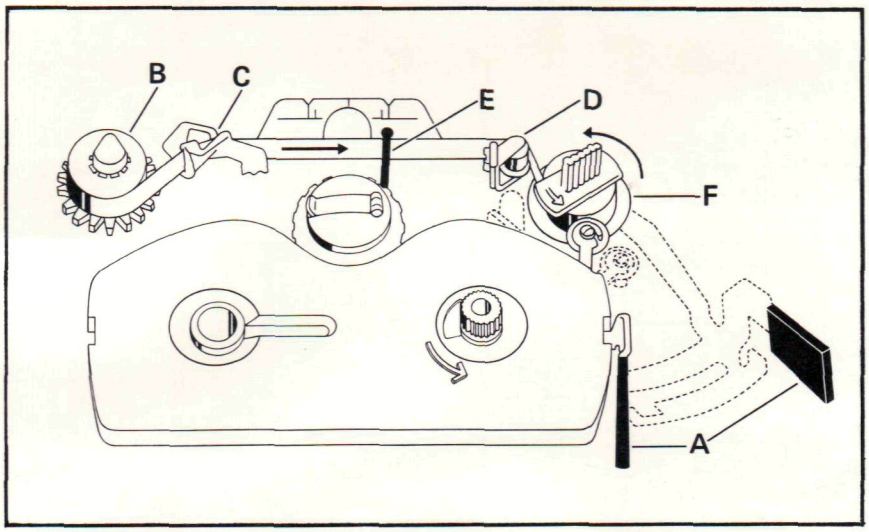
- Center the carrier.
- Lift the cover.
- Keep the paper bail against the platen.
- Pull the ribbon load lever A* to the load position 1 until it snaps against the stop F.
- Using both hands, hold the ribbon cartridge at the front corners H and lift straight up.

### To Install a New Ribbon:

- Be sure the ribbon load lever A is in the load position 1.
- Put the ribbon leader (uninked portion) over the outside of the guidepost B and ribbon guides C and D. Failure to do so will cause ribbon breakage.
- Position the ribbon cartridge so that it fits between the spring clips E. Firmly push down both ends of the cartridge.
- Thread the leader through ribbon guides C and D.
- Turn the knob on the cartridge in the direction of the arrow until the leader is past the right ribbon guide D.
- Move the ribbon load lever A to the type position 2.
- Close the cover.

*The ribbon load lever cannot be removed if the tape load lever I is in the load position.

## Changing the Correction Tape




**To Remove the Tape:**

- Move the tape load lever A to the right.*
- Lift off the empty tape spool B (twist slightly clockwise); remove take-up spool.

**To Install New Tape:**

- Use a tape with a yellow spool with a ribbon which has a yellow knob; a blue spool with a ribbon which has a blue knob.
- Gently separate the two spools, but keep them connected by the yellow or blue tape (leader).
- Place new tape spool B on the left spindle.
- Thread the leader through the guide C, behind the separator wire E, and behind the roller D.
- Place the take-up spool F on the right spindle. Turn the take-up spool in the direction of the arrow until the leader is past the roller.
- Close the tape load lever A. (The lever must be closed before you begin to type.)

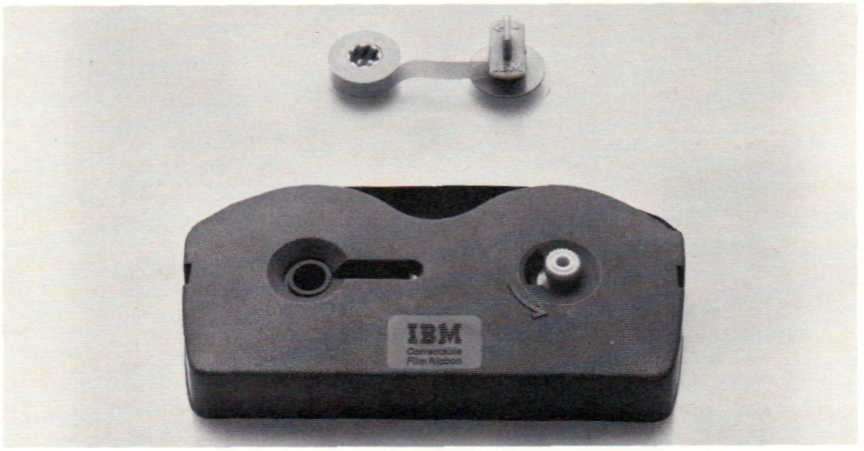
*The tape load lever cannot be moved if the ribbon load lever is in the load position.

## Typewriter Supplies and the IBM Supply Agreement

For convenience and economy in purchasing supplies, ask your IBM Representative about the IBM Supply Agreement.

It gives you quantity prices, systematic shipments as supplies are needed, with no advance payment, and full protection against price increases during the period covered by the agreement.

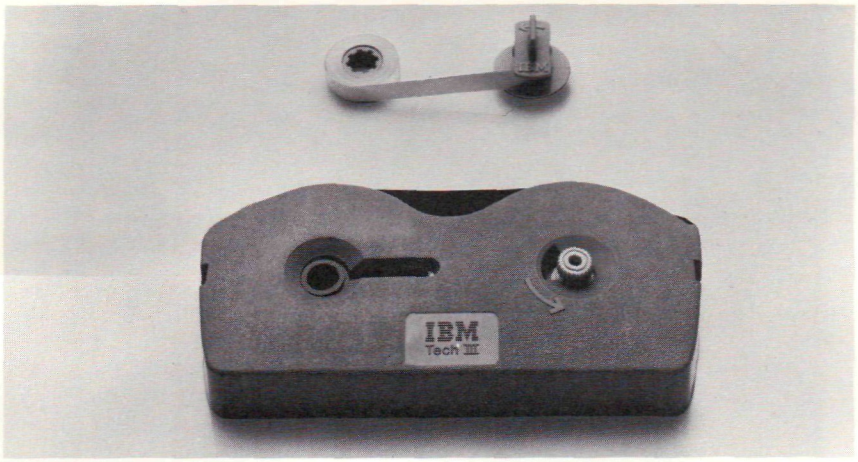
---




**IBM Correctable Film Ribbon** (Reorder #1136432)
The IBM Correctable Film Ribbon has been developed for all general correspondence applications and is specially formulated to work in tandem with the IBM Lift-off Tape for total image removal. When typing negotiable instruments, the IBM Tech III Ribbon should be used. For direct image offset masters and OCR applications, the IBM Film Ribbon is recommended. Available in black only.

**IBM Lift-off Tape** (Reorder #1136433)
Designed to correct typing errors in an instant when used in combination with the IBM Correctable Film Ribbon. Actually lifts the character from the paper.

**Note:** As a reminder to you to match the appropriate tape and ribbon, they are color coded yellow for your convenience.

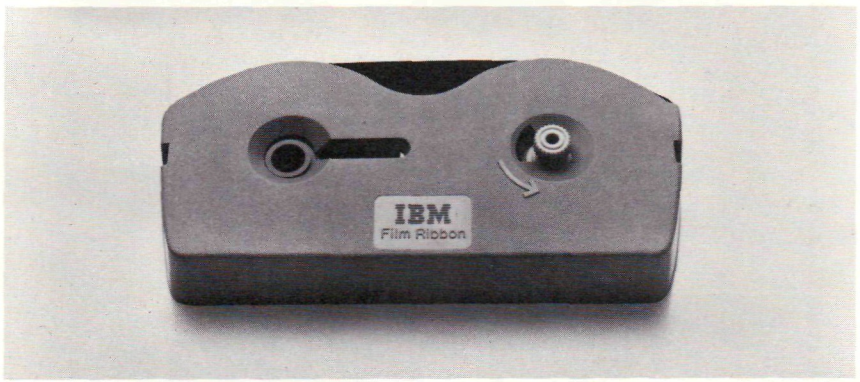



**IBM Tech III Ribbon** (Reorder #1136391)
Provides a high quality, uniform image on a broader range of papers than carbon film ribbons, and reduces ribbon changes. Available in black only. It is virtually impossible to decipher any information on the IBM Tech III Ribbon after its use. The advanced fluid ink technology enables the ribbon to be struck several times in the same area . . . without reducing the clarity of the typewritten page.

**IBM Tech III Cover-up Tape** (Reorder #1136435)
Specially designed to work in tandem with the IBM Tech III Ribbon. The IBM Tech III Cover-up Tape provides complete coverage of the incorrectly typed image. Not satisfactory for making corrections on direct image offset masters, non-white paper, or OCR applications.

**Note:** As a reminder to you to match the appropriate tape and ribbon, they are color coded blue for your convenience.

---




**IBM Carbon Film Ribbon** (reorder #1136390 for black)
This high quality ribbon is supplied in a convenient cartridge that not only simplifies ribbon changing, but also reduces the number of ribbon changes.

In addition to black, Carbon Film Ribbons are available in a variety of colors—light blue, medium blue, dark blue, medium green, dark green, medium brown, dark brown and red.

This ribbon is not recommended for use with an IBM Correcting Tape.

## Elements

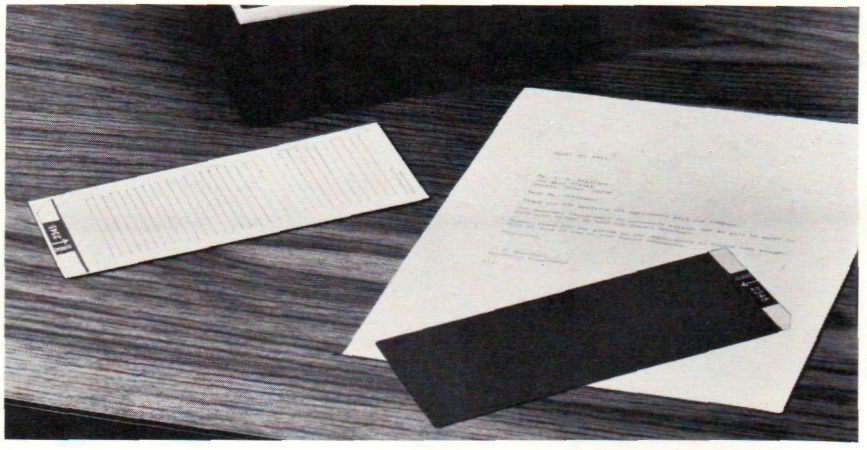



Because the IBM Mag Card II employs a unique kind of printing mechanism—an element—you have typing versatility never before possible. There are elements designed for general correspondence as well as special typing applications.

---

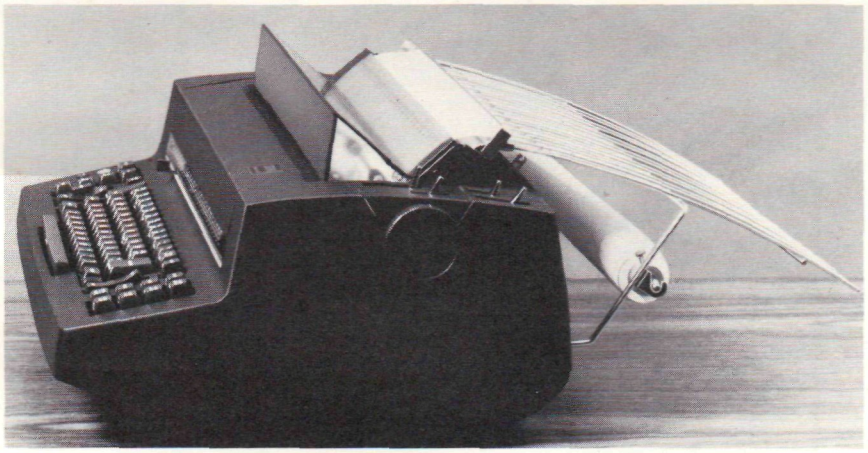
## Magnetic Cards and Card Folders

These supplies and their use are discussed in the Operating Instructions Section.



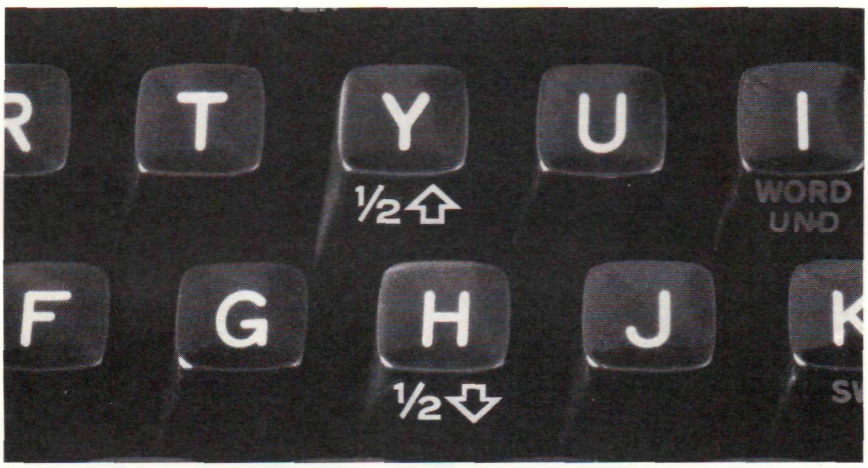
## OPTIONAL FEATURES

### Roll Paper Holder



The Roll Paper Holder is designed for those applications which use roll paper on a daily basis. This feature holds the paper supply and controls feeding.

### Reverse Index




The Reverse Index feature makes the typing of superscripts and/or subscripts much faster and easier. It enables you to index the platen, from the keyboard, a half line in either an upward or downward direction.

---

### Pin Feed Platen

The Pin Feed Platen is designed to accurately feed continuous form paper through the typewriter.

---

### Out-of-Paper Switch

The Out-of-Paper Switch senses when the forms supply is near exhaustion and switches to LINE during unattended playout.

What Happened?



## WHAT HAPPENED?

### TYPING

**You typed an index when you meant to use the backspace key for correction.**

- You cannot backspace over an index. You must line return, play up to the word containing the error, word delete, and retype the word correctly.

**A "c" prints on the paper at the beginning of a centered line, or after typing the Center Instruction.**

- The "c" was typed twice while holding down the CODE Button. Line return, line delete, and retype the line.
- The TPWR Button is down. You cannot type a Center Instruction when this button is down.

**You inadvertently typed a Switch Instruction.**

- Backspace. This will delete the instruction from memory. The "j" will still appear on the paper.

**Nothing happens when you typed a Word Underscore Instruction.**

- The TPWR Button is down. You cannot type a Word Underscore Instruction when this button is down. Use the backspace key and then type underscores.

**You typed a heading to be solidly underscored, but only the last word was underscored when you typed the Word Underscore Instruction.**

- You forgot to put Required Spaces between the words in the heading.

**You are using the decimal tab feature and numbers print on your paper as you are typing.**

- You inadvertently coded the tab key rather than the "½" key.

**You have been typing when all at once the keyboard appears to be locked; you cannot play back, access, read, or record.**

- You may have inadvertently typed a Dec Tab Instruction (code "½"). Carrier return, line return, line delete, and retype the line.

## READING

**You cannot read a card into the memory. The card is ejected by the Card Unit.**

- The Red Light is blinking. There is an error on the card. See the Reference Booklet for an explanation of what to do.
- The Yellow Light is blinking. Memory is full. See the Reference Booklet for an explanation of what to do.
- There is text in the alternate section. This text must be cleared before text can be read into the main section.
- There is nothing on the card but a PE Instruction which is not read into memory with the TPWR Button up.

**You attempt to read a card from the Pack Feed Slot and nothing happens.**

- The card failed to feed into the Card Unit. Remove the cards from the Pack Feed Slot; tap them on the end; replace them in the slot; and read again.

**A card being read ejects with the Red Light blinking. You wipe the card off and attempt to read it in again. It ejects again without the Red Light coming on but did not continue to read the rest of the card.**

- Reading could not continue because there was no text on the card at that point. This condition could exist because the card was prepared on an IBM Mag Card "Selectric" Typewriter and the typist failed to end a line with a carrier return; or because the card is severely damaged.

To read all the good text on the card, follow these steps:

1. Clear memory.
2. Read the card. It will eject again with the Red Light blinking.
3. Remove the card.
4. Depress the CODE Button and hold it down while you read the card again through the Single Card Slot.
5. Reading skips the spot where no text was found and continues.*
6. PAR ADV until the Red Light comes on solid. Line return and depress AUTO. Playback will stop at the Error Code. CHAR/DEL the Error Code and then play back to determine how much text is missing.
7. Retype the missing text.

---

## RECORDING

**You depressed the REC Button and nothing happened.**

- The Green Light is on. See the Reference Booklet for an explanation of what to do.
- You have been typing with the ALT SECT Button down. You cannot record out of the alternate section. If you want the text on

*If the card is severely damaged, it may eject again with the Red Light blinking. If this happens, do not attempt to read the card again. Clear the memory and retype the page.

a card, clear the alternate section, release the ALT SECT Button, and retype the text.
- You have been typing with the TPWR Button down.
- There is a card in the Single Card Slot.
- The Red Light is blinking. See the Reference Booklet for an explanation of what to do.
- A card failed to feed into the Card Unit. Remove the cards from the Pack Feed Slot; tap them on the end; replace them in the slot; and depress REC again.
- There is no text in memory.

---

## REVISING

**You depressed READ and a card ejected from the Single Card Slot and the Green Light is blinking.**

- The page is recorded on two cards. Remove the card from the Single Card Slot and place it with the other cards used for recording. Reading will continue as soon as the card is removed from the Single Card Slot.
- Two cards were read in succession. Remove the first card from the Single Card Slot and place it with the other cards used for recording. Reading will continue as soon as the card is removed from the Single Card Slot.

**You read in a new card to continue revising a document and then line returned. When you played back a word, it was not the first word of the page you just read in.**

- The new page read in was a continuation of a paragraph from the previous page, thus it begins at the point where the previous page ended, which was not at the beginning of a line. When you line returned, the pointer was moved to the beginning of the line. Continue to play by word until you reach the word that begins the page just read in.

**The lines in memory do not match the original copy.**

- Text was scanned before it was revised. Continue to use PAR ADV and LINE ADV to access the text in memory; use LINE RET if you access too far.
- You are playing out a table with the NO ZONE Button up.

**You read a new card and find that an entire page is missing.**

- You have recorded all the text in memory, then keyed a new page, scanned and recorded it. When it was recorded it did so on the card fed from the Pack Feed Slot. This card contained the text which is now missing.
  Clear the memory. Take the card which ejects and replace it at the bottom of the stack of cards in the Pack Feed Slot. Read in the card from the Pack Feed Slot. Retype the missing page. Scan the text and continue.
  See IBM Mag Card II Logic (p. 266) for an explanation of why this happened.

## FINAL COPY

**Two paragraphs appear together without a carrier return between them. The carrier return was there on the original copy.**

- The paragraphs were separated by a single carrier return and a tab and there were no spaces following the last word in the paragraph. During revision the last word was played by word and the carrier return was converted to a space.

**Extraneous carrier return(s), spaces, characters, etc. appear on the final copy.**

- You inadvertently depressed a key while the text was in memory and it was recorded on the card.
- You inadvertently depressed a key while the text was being read into memory.

**Centered headings and tables are not placed properly on the paper.**

- The left margin was at a different position for playback than when the text was typed.
- Individual tabs had been used for typing, but were not set for playback.

**There is text missing from the final playback.**

- You forgot to enter a line count of 00 for playback. The line count in the typewriter stopped playback and you thought it was the end of the page; you cleared the memory and continued playing back. The text is on the card; locate the card and play the page back again.

**A word that did not come up for a hyphenation decision is typed beyond the line length.**

- There is a Stop Instruction typed at the beginning of the word. The typewriter will not return on the space preceding a non-printing instruction.

**You played back text using two escapements and the first line in the new escapement exceeds the line length.**

- The carrier was not at the left margin when you changed pitch. The carrier must be positioned at the left margin when the pitch is changed to produce the proper line length.

  Play back the page again, making the pitch change at the left margin.

**Text you thought you had deleted appears at the end of a document.**

- You line returned and forgot to line delete before retyping a line. The incorrect line was "pushed" along in memory to the end of the document.

  Delete the unwanted text and play the page again.

## PLAYING BACK TO CREATE FINAL CARDS

**You depressed REC to record the page just played back; you hear only a short recording sound before the card falls into the Stacker.**

- The following sequence may have occurred:
  - A card was read in with the TPWR Button down; the PE Instruction was read into memory.
  - Playback stopped at line count which happened to be the end of text in memory.
  - You typed a PE Instruction and recorded the page; one PE Instruction was recorded out of memory, the other one remained.
  - You read in the next card to play back the next page.
  - Playback stopped at line count and you typed a PE Instruction.
  - You depressed REC.

  The short record sound you heard was the recording of the PE Instruction remaining in memory. Depress REC again; when the Green Light comes on, take the card that just fell in the Stacker and use it to insert in the Single Card Slot.

**Playback does not stop at the end of the paper.**

- You forgot to enter a line count.

**Playback stops in the middle of a page before reaching the line count you have entered. (There are no Stop Instructions in the text.)**

- The End-of-Ribbon Shut-off has stopped playback. You must put on a new ribbon to complete playback.

---

## PLAYING BACK FINAL CARDS

**You depressed AUTO and nothing happened.**

- There is nothing in memory.
- You are at the end of memory.

**Playback stops in the middle of a page before reaching the line count you have entered. (There are no Stop Instructions in the text.)**

- The End-of-Ribbon Shut-off has stopped playback. You must put on a new ribbon to complete playback.

**You stopped playback in the middle of a page of indented text. You clear the memory, but the carrier does not remain at the left margin; it tabs in.**

- An indent level established by Required Tabs is not cleared when the memory is cleared so that succeeding pages of indented material may be played back without having to reestablish the indent level for each page.

  To cancel an indent level that is no longer required, type a Required Carrier Return and then clear the memory.

## SCANNING

**You scanned and the typewriter printed a reference line with a line number that is less than the line count you entered.**

- There is a PE Instruction in memory because:
  - you typed one there to end the page at a specific point; or
  - you read the card in with the TPWR Button down.

  For the first condition, scan again and continue with the project.

  For the second condition:
  - Depress PAGE START.
  - Access to the end of the text in memory read from the card.
  - Play through the last word or carrier return and then line delete once to delete the PE Instruction.
  - Scan again.

**There is a hyphenation decision on almost every line and the standard line length is being used.**

- You may have inadvertently reset the line length when you were revising the text (coded PAR ADV) and did not realize it. Reset the line length, page start, and scan again.

**You are making a hyphenation decision and nothing happens when you depress CHAR.**

- There is a Stop Instruction in the word.

**You scanned to record a page and a card did not feed from the Pack Feed Slot. (Using Save Original Procedure for revision.)**

- The Green Light is on solid. It will be necessary to remove the cards from the Pack Feed Slot, tap them on the bottom and reinsert them in the Pack Feed Slot. Now, you must depress REC (not code PAGE START) to get the text out of memory.

**You have entered a line count and the end of text indication is printed indicating that the typewriter ran out of text; the number printed is greater than the line count you entered.**

- The end of text was reached before the typewriter could determine if the line count was the first line of a paragraph or next to the last line. Continue as you usually would when the end-of-text indication is given.

**The reference line given is the next to the last line of a paragraph.**

- There was a hyphenation decision in the line following the line count and the typewriter did not get as far as the paragraph identification.

**You attempted to scan and nothing happened.**

- There is a card in the Single Card Slot; remove it and scan again.
- The TPWR Button is down; release it and scan again.
- The ALT SECT Button is down; you cannot scan the alternate section.

**You scanned to record the first page of a document and the Green Light comes on unexpectedly; you thought the card was in the Card Unit.**

- You read the card in with the TPWR Button down. The card fed, read, and stacked and the PE Instruction from the card was read into memory.

  You should rescan the page again without the PE Instruction in memory so that you will get the proper page ending. However, since the Green Light is on, you must record before you can rescan. Follow these steps:

  - Be sure the TPWR Button is up.
  - Remove the card from the Stacker and insert it through the Single Card Slot. The Green Light will go out and the card will be recorded on and dropped into the Stacker.
  - Remove this card from the Stacker and hold it.
  - Continue to scan until the memory is empty. Insert cards through the Single Card Slot when the Green Light comes on. Remove them as they fall into the Stacker and place them on top of the one you are holding. Continue to depress REC until the memory is empty.
  - Place the stack of cards you are holding on the bottom of the stack in the Pack Feed Slot.
  - Read all the cards you just recorded back into memory.

  Now you are ready to rescan the text. Since the text was read in with the TPWR Button up, there are no PE Instructions in memory.

**The reference line prints out with an unexpected line number.**

- You played from a hyphenation decision past the line count.

  Depress PAGE START and then scan again to get the proper reference line.

- There is no line count entered in the typewriter, or an incorrect line count was entered.

**When a word is printed for a hyphenation decision, you depress AUTO to put the entire word at the end of the line, but the typewriter does not resume scanning.**

- The hyphenation decision occurred in the last word in memory.

  If this happens to be the last word of the document, you must depress REC to get the text out of memory. Scanning would only result in the same situation.

  If you have more text to revise, read in the next card and continue.

- The word is followed by a Stop Instruction. Depress AUTO again.

## SCANNING

**You are playing by CHAR to hyphenate a word and the keyboard locks and the Red Light is on.**

- There is an Error Code in memory. Delete one character and rekey it. Play the next character to be sure all text is there. Continue with hyphenation decision.

**You depressed AUTO after making a hyphenation decision and the typewriter prints part of a line and stops.**

- There is an Error Code in memory. Delete once by character and rekey the missing character. Play by CHAR to be sure the next character is there. Code PAGE START to resume scanning.

**You coded PAGE START, but the carrier did not return to the left margin. Instead it printed a reference line number before returning and printing the reference line which was the first line of a paragraph.**

- This happened because the preceding page had exactly one less the number of lines than line count and the carrier return ending this line fell in the Line End Zone. It was also the last line of a paragraph separated only by one carrier return and a tab. The tab was not at the end of that page, but at the beginning of the next one. All of these conditions must exist to give the improper page ending.

  To end the page properly, line return once before coding PAGE START to continue scanning to the end of memory. The Page End Instruction will be inserted by the typewriter before the first line of the paragraph.

---

## REPETITIVE LETTERS WITH SWITCH CODES

**The constant information is printing with "j's" on copy during playback.**

- The variable information was read in with TPWR up. There is no PE Instruction in the memory in the alternate section and when the empty memory at the end of the text is reached, the pointer switches back to the main section and prints only the "j" each time it switches.

---

## UNATTENDED PLAYBACK

**A page of indexes occurs while doing unattended printing.**

- This will occur if:
  - there is text in memory and the pointer is at the end of memory when unattended printing is begun; or,
  - if the actual number of lines on a card is equal to or one less than the line count entered.

## ACCIDENTALLY DEPRESSED THE READ BUTTON

**You have cards for recording in the Pack Feed Slot and depress the READ Button when you meant to depress the REC Button. A card is fed from the Pack Feed Slot. Whatever is recorded on the card is read into memory—the card stays inside the unit.**

- If you are doing original keyboarding:
  1. Play out the last line of the page to be recorded, including the carrier returns following.
  2. Type a PE Instruction.
  3. Depress REC. The text up to the PE Instruction will be recorded on the card inside the unit. The recorded card falls into the Stacker.
  4. Clear the memory to delete the unwanted text.
  5. Continue with your typing.

- If you are revising using the Save the Original procedure:
  1. Use PAR ADV and LINE ADV Buttons to locate the last line of the page being revised.
  2. Play out the last line, including the carrier returns following.
  3. Type a PE Instruction.
  4. Depress REC. The updated text is recorded on the card inside the unit.
  5. Clear the memory to delete the unwanted text.
  6. Continue with the project. (Insert the next card to be read through the Single Card Slot.)

**You have cards in the Pack Feed Slot that you are reading into memory and you depress the READ Button when you meant to depress the REC Button.**

- If there is a card inside the unit, this card ejects through the Single Card Slot and the Green Light is blinking:
  1. Remove the cards from the Pack Feed Slot.
  2. Remove the ejected card from the Single Card Slot and place it with the cards that can be recorded on.
  3. The typewriter will attempt to feed a card from the Pack Feed Slot. Since the slot is empty, nothing will happen.
  4. Replace the cards in the Pack Feed Slot.
  5. Depress REC. The Green Light will come on solid.
  6. Insert a card for recording through the Single Card Slot.
  7. Continue with the project.

- If there is no card inside the unit, a card is fed from the Pack Feed Slot and is read into memory and remains inside the unit:
  1. Insure that the page to be recorded out of memory is ended with a PE Instruction.
  2. Depress REC.
  3. The page will record on the card now inside the unit.
  4. Continue with the project.

## ACCIDENTALLY DEPRESSED THE REC BUTTON

**You have cards for recording in the Pack Feed Slot and you accidentally depressed the REC Button. A card is fed from the Pack Feed Slot and recording begins.**

1. Continue recording until the entire memory is recorded on cards.
2. Remove these cards from the Stacker.
3. Read them back into memory through the Single Card Slot. The memory now contains the same text as it did before you accidentally depressed the REC Button.
4. Continue with the project.

**You have cards in the Pack Feed Slot that you are reading into memory and you depress the REC Button accidentally.**

- If there is a card inside the unit, recording will begin:
  1. Continue to record until all the text in memory is recorded on cards.
  2. Remove these cards from the Stacker and place them on the bottom of the cards in the Pack Feed Slot.
  3. Depress READ.
  4. Continue to read until the cards are read back into memory. (The last card will stay inside the unit.) The text in memory is now exactly as it was before you accidentally depressed REC.
  5. Continue with the project.

- If there is no card inside the unit, the Green Light will come on solid:
  1. Insert a card for recording in the Single Card Slot.
  2. Continue to feed cards in this manner until all text has been recorded and the memory is empty.
  3. Remove these cards from the Stacker and place at the bottom of the cards in the Pack Feed Slot.
  4. Depress READ.
  5. Read until all these cards are back in memory. (The last card stays inside the unit.) Text in memory is now exactly as it was before you accidentally depressed REC.
  6. Continue with the project.

- If there is no card inside the unit, nothing will happen. The memory is empty.

- If there is no card inside the unit, a card may feed from the Pack Feed Slot and be recorded on. This card contained the text for the next page you are revising.

  1. Take the card from the Stacker and place it at the bottom of the cards in the Pack Feed Slot.
  2. Read that card in.
  3. Rekey the page that was "lost"; the next page to be revised.
  4. Continue the project.

## A

"access"
buttons . . . . . 128

Acoustical Filter Hood . . . . . 9
care and cleaning . . . . . 274

align numbers . . . . . 233

ALT SECT Button . . . . . 17, 245, 251

Alternate Section . . . . . 245-265
to begin playback from . . . . . 251
automatic reading into . . . . . 260
to clear text from . . . . . 253
no text in . . . . . 252
switching to . . . . . 247, 250, 264
with TPWR up . . . . . 251

author changes (see Revisions)

AUTO Button . . . . . 5, 20
coded . . . . . 231

## B

Backspace
coded . . . . . 55, 74
to correct errors . . . . . 18, 74, 135
Required . . . . . 55
without deleting . . . . . 55

"batch"
playback . . . . . 89
recording . . . . . 86

bell . . . . . 13

"blank" cards . . . . . 83

Buttons (see specific button)

## C

Carrier
backing up . . . . . 53, 234

Carrier return
by itself . . . . . 39
playback of . . . . . 28
Required . . . . . 46, 114

Card(s)
automatic reading of . . . . . 229
"blank" . . . . . 83
"constant" . . . . . 77, 248
drop into Stacker . . . . . 91
eject through Single Card Slot . . . 5, 91, 109
filing . . . . . 80
final . . . . . 170
inside unit . . . . . 90
to match typewritten copy . . . . . 90
in Pack Feed Slot (logic) . . . . . 266
recorded after playback . . . . . 90
to record on . . . . . 83
to remove from inside unit . . . . . 91
sequence in Stacker . . . . . 89
"variable" . . . . . 77, 249

Card Duplication . . . . . 123

Card Eject Code . . . . . 267

Cardholder . . . . . 7
care and cleaning . . . . . 272

Card Skip . . . . . 91, 142, 215

Card Unit . . . . . 1
Pack Feed Slot . . . . . 3, 82
Single Card Slot . . . . . 4, 109, 111, 124
Stacker . . . . . 4, 89

Centering
dots on margin scale . . . . . 12
error correction . . . . . 54
headings . . . . . 61, 237
underscored . . . . . 51, 55
instruction . . . . . 53
lines . . . . . 53

Center Instruction . . . . . 53

CHAR DEL (Character Delete) . . . . . 135

CHAR/STOP Button . . . . . 22

Clear instruction . . . . . 27
to eject card . . . . . 91
playback of final cards . . . . . 170

Clear memory . . . . . 27
alternate section . . . . . 245
main section . . . . . 245

CODE Button . . . . . 24

Code/LINE ADV . . . . . 193, 194

Code/PAR ADV . . . . . 69, 194

Columnar projects . . . . . 58, 233

Compatibility . . . . . 267

"constant" card . . . . . 77, 247

## D

Daily Cards . . . . . 80

dashes . . . . . 42

Dec Tab Instruction . . . . . 233
- codes in memory . . . . . 234
- compatibility . . . . . 267
- error correction . . . . . 235
- "locked" in . . . . . 235
- revising . . . . . 241
- setting tabs . . . . . 233

Delete
- backspace to . . . . . 18, 135
- carrier return . . . . . 39
- Center Instruction . . . . . 54
- character . . . . . 135
- Dec Tab Instruction . . . . . 241
- line . . . . . 39, 135
- Required Carrier Return . . . . . 46
- Required Hyphen . . . . . 42
- Required Space . . . . . 44
- Stop Instruction . . . . . 66
- tab with word . . . . . 153
- word . . . . . 36, 135, 153
- Word Underscore Instruction . . . . . 48

Double underscore . . . . . 68, 238

Dual Pitch Lever . . . . . 10

Duplicate Cards (see Card Duplication)

## E

Element . . . . . 11
- care and cleaning . . . . . 275

Elite spacing . . . . . 10

envelopes, preparation of . . . . . 254

Error Correction
- backspace/retype . . . . . 18, 74
- Line Return . . . . . 34

Error Correct Backspace . . . . . 74

## F

Feed, Read, Stack . . . . . 228

Filing Cards . . . . . 80

Final Cards
- creating . . . . . 170
- playback of . . . . . 170
- unattended playback of . . . . . 229
- Line Count for . . . . . 170

Footnotes, typing . . . . . 209

## G

Green Light (see Reference Booklet)
- blinking . . . . . 110
- solid . . . . . 111, 124

## H

Headings
- centered . . . . . 53, 61
- column . . . . . 61, 227
- page . . . . . 209
- underscored . . . . . 51, 55

HYP Instruction . . . . . 161, 247

Hyphen
- in Line End Zone . . . . . 28
- Required . . . . . 42
- typed during playback . . . . . 74

hyphenation
- during playback . . . . . 31
- last word of paragraph . . . . . 161
- when scanning . . . . . 161
- with TPWR down . . . . . 74
- of underscored words . . . . . 49

## I

Indented material
- error correction . . . . . 116
- with footnotes or headings . . . . . 213
- revising . . . . . 153, 178
- typing . . . . . 113

indexing between pages . . . . . 228

Index Return
- instruction . . . . . 25
- logic of use . . . . . 267
- with names and addresses . . . . . 262

Individual letters . . . . . 74

Insertions
- indented . . . . . 153
- text . . . . . 134
- tables, statistical . . . . . 151, 173

J

"j" printed ..... 247

L

Letters
automatic playback ..... 74, 259
batching ..... 86
repetitive ..... 71, 248

Left margin stop ..... 12

LINE ADV Button ..... 129

Line Count
instruction ..... 100
playback final cards ..... 170
scanning to ..... 162
unattended printing ..... 228
updated cards ..... 141

LINE DEL (line delete) ..... 39, 135

Line endings
during playback ..... 27, 58
rearranged ..... 159

Line End Zone ..... 28
line ends before ..... 30
NO ZONE down ..... 58
Required Space ..... 44
stop at beginning of ..... 31

Line length
change/set ..... 69
preset ..... 13
scanning ..... 193, 194

Line number ..... 162
alone ..... 166
followed by a line ..... 162
with a hyphen ..... 161
with an "s" ..... 176
with a word ..... 161

Lines per page ..... 101

Line Return
access to point of change ..... 130
corrections ..... 34

Line space lever ..... 7

"locked" keyboard
dec tab ..... 235
scanning ..... 201
with yellow light on (see Reference Booklet)

Logic ..... 266

M

Magnetic Cards (see Cards)

Main section ..... 245

merging ..... 247

Margin scales ..... 12

Memory
alternate section ..... 245
clearing ..... 27, 84
dividing ..... 245
main section ..... 245
playback from ..... 27
reading into ..... 4, 83, 124
revising text in ..... 129
recording out of ..... 80
scanning ..... 159
typing into ..... 17

Multiple-Page Projects ..... 96
playing back ..... 100
revising
revise and scan ..... 159
save originals ..... 220
two-pass ..... 141
with footnotes, page headings,
page numbers ..... 209

N

Names and addresses
automatic playback ..... 249
manual fill-in ..... 71
"packing" on card ..... 262

New Page
author's note ..... 188, 197

NO HYP Instruction ..... 193, 194

NO ZONE Button ..... 17, 58, 64, 170, 231

O

On/Off Control ..... 1

One-unit Backspace ..... 234, 267

Original Cards — save ..... 220

Overlap
read/playback ..... 89
scan/record ..... 166

P

Pack Feed Slot
- final cards ... 170
- loading ... 3, 83
- logic ... 266
- reading ... 83, 90
- recording ... 83

"pack" names and addresses ... 262

Page(s)
- endings ... 84, 170
- headings ... 209
- insert ... 189
- length ... 100, 162
- numbers ... 209
- read ... 109
- record ... 106
- retype ... 189
- revise selected ... 215
- skip ... 215
- two-card ... 106

Page End Instruction ... 84, 102
- delete ... 200
- reading with TPWR down ... 267
- record to ... 103
- scan to ... 188
- to type ... 84, 188
- on two-card page ... 109

Page Start ... 19, 130-131

paper, to insert ... 8

Paper Bail ... 7

Paper centering scale ... 8

Paper guide ... 8

Paper support ... 7

Paragraph
- definition ... 128
- indented ... 113, 153
- standard ... 225
- with variables ... 227

PAR ADV ... 128

pica spacing ... 10

Playback ... 19, 27
- automatic letters ... 259
- batching ... 89
- final cards ... 170
- line for line ... 58
- multiple-page projects ... 100
- overlap with reading ... 89
- to page length ... 100
- repetitive letters ... 248
- stop
  - automatically ... 65
  - instantly ... 22
  - at Line Count ... 100
- unattended ... 228
- updated cards ... 148

"Pointer" ... 19, 39, 116, 128, 251

Prerecorded exercise cards ... 123, 132

R

Read
- Button ... 83
- into main section ... 246
- from Pack Feed Slot ... 83, 88, 266
- from Single Card Slot ... 124
- variable information ... 261, 264

Record
- alternate section ... 246
- button ... 83
- from Pack Feed Slot ... 83, 266
- with Scan Instruction ... 164, 166

"Reference" line ... 162
- at PE Instruction ... 197
- end page after/before ... 195
- not same as line count ... 162

Repeat (REPT) Instruction ... 72, 248

Repetitive letters ... 71
- automatic ... 248

Required Backspace ... 55, 234

Required Carrier Return ... 46, 113

Required Hyphen ... 42
- underscore words with ... 50

Required Space ... 44

Required Tab ... 113

Revise (Revisions)
- to create updated cards ... 141
- dec tab material ... 241
- definition ... 128
- indented material ... 153, 171
- multiple-page ... 164
- save original cards ... 221
- and scan ... 159
- selected pages ... 215
- tables ... 151, 176
- two-pass procedure ... 141

## S

Save Original Cards . . . . . 221

Scan Instruction . . . . . 159

Scanning
- after hyphenation decision . . . . . 161
- after "reference" print . . . . . 162
- below line count line . . . . . 195
- comparison with two-pass revision . . . . . 185
- to create final cards . . . . . 159
- definition of . . . . . 159
- empty memory . . . . . 201
- to end of text . . . . . 166
- "locked" in . . . . . 201
- multiple-page projects . . . . . 159
- to Page End Instruction . . . . . 197
- purpose of . . . . . 159
- stop at line count . . . . . 162
- to Stop Instruction . . . . . 162
- tables . . . . . 176
- with hyphenation . . . . . 161
- without hyphenation . . . . . 193

Single Card Slot . . . . . 4
- card ejects from . . . . . 91, 109
- insert card in . . . . . 111, 124

Space,
- after ending punctuation . . . . . 25
- in Line End Zone . . . . . 28
- Required . . . . . 44

Spacing . . . . . 10

Special cards, filing . . . . . 80

Special Card Handling . . . . . 209

Special Instructions . . . . . 24
(also individual instructions)

Stacker . . . . . 89

Standard Paragraphs . . . . . 225

Stop Instruction . . . . . 65, 71, 176, 231, 247

Stored Cards . . . . . 80

Switch Instruction . . . . . 247

syllable hyphen . . . . . 29

## T

Tables
- centered headings . . . . . 61
- to insert a line . . . . . 151, 176
- playing back . . . . . 58
- revising . . . . . 151
- scanning . . . . . 176
- typing . . . . . 58
- mixed with text . . . . . 64
- using dec tab . . . . . 233

Tab
- to set, clear, change . . . . . 63
- set for dec tab . . . . . 233
- Required . . . . . 113
- Dec . . . . . 234

Tab grid . . . . . 13, 59
- clear and reset . . . . . 63

temporary left margin . . . . . 113

text
- following point of change . . . . . 132
- with tables . . . . . 64
- revising . . . . . 127

TPWR Button . . . . . 9, 17
- Down . . . . . 17, 63, 74, 101, 125 170, 209, 250, 267
- Up . . . . . 17

Track Link Code . . . . . 267

Two-Card Page
- typing . . . . . 106
- playback . . . . . 109

Two-Pass Revision procedure . . . . . 141

Typamatic keys . . . . . 9

Type, manually . . . . . 71
- size . . . . . 11

Typewriter Adjustments . . . . . 9
- during playback . . . . . 66

Typewriter Features . . . . . 7, 269-281

Typing into memory . . . . . 17-78

## U

Unattended printing . . . . . 229
- to interrupt . . . . . 232
- auto letters . . . . . 245
- paper position . . . . . 230
- to restart . . . . . 232
- to stop . . . . . 232

Underscore
double ..... 68, 238
centered heading
solid ..... 55
column ..... 61, 237
hyphenated word ..... 50
spaces ..... 51

Updated Cards ..... 148

## V

Variable information ..... 247
typing
with envelopes ..... 254

Variable Cards
auto reading of ..... 260
in body of letter ..... 257
more than one card of ..... 261
for unattended playout ..... 229

## W

WORD
to hyphenate
during playback ..... 31
during scan ..... 161
printed for hyphenation ..... 161
correct error in ..... 192
playback ..... 21
to delete ..... 36, 135, 153

WORD Button ..... 21
with dec tab ..... 241

Word Delete ..... 36

Word Underscore Instruction
with column of numbers ..... 245
when centering ..... 55

Writable Area Cards ..... 80

## Y

Yellow Light
blinking (see Reference Booklet)
flashing ..... .160
Solid (see Reference Booklet)

## Z

Zone (see Line End Zone)